

Corporate Social Responsibility, Management Decision Making  
and The Use of Accounting Information  
The Nineteenth Century Lowell, Massachusetts Textile Mill Experience

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Corporate social responsibility is sometimes argued to have originated in the second half of the twentieth century (Boatright, 2000). However, there is ample evidence that managers have sensed some level of social responsibility from the earliest days of economic activity. Scripture has much to say about the social responsibility of business (and the personal responsibility of business decision-makers), a kind of social contract between a business and its various "stakeholders". Lev. 19 and 25 give instruction about assistance to the poor, avoidance of hoarding through wealth redistribution in the jubilee year, avoidance of usury, prompt payment of wages, and fair treatment of customers and vendors in regard to "weights & measures". 1Tim. 6:17 warns of putting our trust in the "uncertainty of riches". Rev. 5 instructs us to give honor to God in all we do. Careful stewardship is required in Matt. 25 and 1Cor. 4. Warnings against selfishness are found in many places, including Prov. 11, Matt. 25, and Luke 12. Justice, love for our neighbors and humility before God is called for in Micah 6. In commenting on this idea of a social contract, Chewing notes that "society expects business to be partners in alleviating poverty. So does God, who desires a good life for all people, a life free from economic slavery and repression" (Chewing, 1990). Hill points out that "Christian ethics...prizes the life that seeks to emulate God's character" (Hill, 1997).

The idea that business enterprises enter into social contracts with society at large is clearly demonstrated in a market system that allows corporations to earn substantial profits for stockholders and provide high pay for management, while requiring, in return, a variety of obligations. These obligations are sometimes imposed on the business in the form of laws or stockholder or marketplace demands. Other times social obligations are self-imposed because of a sense of duty, fairness or compassion. Some have argued that self-imposed socially responsible actions may be taken out of self-interest (Boatright, 2000). For Christians social contracts are entered into as part of the life of Christ. Examples of business social obligations include tax payments, nondiscrimination in hiring, environmental protection, safe and useful products, healthy working conditions, fair wages for employees, fair treatment of competitors, etc. Companies that violate their social contracts ultimately are punished by society for their actions. Recent examples of violators include the tobacco industry and Microsoft Corporation. In these cases, society responded through legal action brought by government. There are, of course, numerous examples of organized labor taking action when they have perceived an employer has violated its contractual obligation to employees. Often consumers take action, such as in the case of the poor quality or design of such cars as the Yugo, the Ford Pinto and much earlier, the classic case of the Ford Edsel. The financial marketplace is quick to take action by bidding down stock prices

when profits suffer because of the results of a corporation violating its social contract with stockholders.

"Accounting is a service activity. Its function is to provide quantitative information, primarily financial in nature, about economic entities that is intended to be useful in making economic decisions---in making reasoned choices among alternative courses of action." (APB Accounting Principles, Statement #4, 1970). Management decisions are made within the context of the many social contracts to which a business is a party. Accounting information is used to measure the results of management action in carrying out the terms of these social contracts.

This paper examines management's social contract and the financial information feedback system used to measure performance during the early days of the industrial revolution in the United States. The textile manufacturing industry of early nineteenth century New England (specifically, The Appleton Company of Lowell, Massachusetts) will serve as the case to be studied. The Lowell textile industry represents the first example of large scale manufacturing and the first example of absentee ownership at the beginning of the industrial revolution in the United States. The question to be asked is whether available management information was adequate for effective decision-making within the context of a changing social contract. The historical evidence shows that the New England textile industry was founded on a social contract (an informal contract) which called for some sense of restrained self-interest by owners. The idea, to be sure, was to create great wealth for mill owners, but without exploiting employees to the extent that a permanent "underclass" of factory laborers was created. The hope of the founders, in addition to creating substantial wealth for themselves, was also to contribute to the growth of a financially secure working middle class in society. However, within less than twenty years, management effectively abandoned these founding ideas by making decisions which violated the social contract it had entered into with employees. The results were ongoing labor disputes, economic decline and finally, early in the 20<sup>th</sup> century, the collapse of the textile industry in New England.

The historical evidence in the form of company records still available from various textile mills of the time indicate that accounting information was inadequate for good decisions. Management regularly collected detailed information about factory labor costs and exercised diligence in "managing" labor, but paid far less attention to material and overhead costs, capital budgeting and technological innovation (Johnson, 1991). Based on the historical record it appears arguable that the failure to collect higher quality information was a contributing factor to the decline of the industry.

## II

The textile industry in the early 1800's in New England is the earliest example of large scale manufacturing in the United States. Specifically, Lowell, Massachusetts (after

an earlier, smaller effort in Waltham, Massachusetts), "...a planned textile mill city, in scale, technological innovation, and development of an urban working class, marked the beginning of the industrial transformation of America" (U.S. National Park Service Handbook #140). The Lowell textile manufacturing mills were the first demonstration of a fully integrated manufacturing process, beginning with raw cotton and after carding, spinning and weaving, finishing the process with cloth ready for sale...."from bale to bolt". Because of Lowell's location on the Merrimack River (at a point where the river falls thirty feet in less than one mile) and its thirty mile distance from Boston, the Lowell textile mills also represent the first large scale example of absentee ownership during the U.S. industrial revolution. Most mill owners lived in Boston, visiting Lowell only occasionally. This meant that without continuous first-hand knowledge of operations, owners had to rely on management information, including accounting system feedback, for making decisions.

Francis Cabot Lowell was a prominent Boston merchant trader who had accumulated a substantial fortune through international trade. Merchant trading had been an important source of economic activity in Boston prior to the American Revolution. New England's natural geography made it difficult to achieve any significant level of financial stability from agriculture. During colonial days merchants benefited from the legal and military protection afforded by being part of the British empire. After independence many U.S. merchant traders looked for opportunities to replace the increasingly risky business of international commerce.

Lowell traveled extensively through England and Scotland during the years 1810-1812. While the purpose of his trip was a kind of leave of absence from business responsibilities because of poor health, most historians argue that another, maybe more important reason, was "industrial piracy". While in Scotland Lowell visited with Nathan Appleton, a distant relative of Lowell and a fellow Boston merchant trader. They discussed the prospects of bringing cotton manufacturing to the U.S. Because of British laws against the exportation of technology or emigration of skilled textile workers, Lowell memorized the essential design of the power loom while visiting various textile mills in Manchester, England (Dalzell, 1987). Within two years of his return to Boston Francis Lowell and Nathan Appleton, along with several partners, including Lowell's brother-in-law Patrick Jackson (later referred to by historians as "The Boston Associates") established the The Boston Manufacturing Company and by 1815, the first mill in Waltham, Massachusetts was operating with power supplied by water from the Charles River.

By 1821 the Boston Associates (Francis Lowell died in 1817) determined that water power in Waltham was inadequate to meet the needs of their expanding business. As a result, they shifted their expansion planning to what would become the industrial city of Lowell. Within two years the first Lowell mill was in operation. By 1840 there were dozens of mills and miles of canals providing water to power the mills. In those two decades the population of Lowell grew from a farming village of about 200 to an industrial city of 21,000, the second largest city in Massachusetts and the third largest in New England. The population and industrial output of Lowell continued to grow in the

decades that followed. The population reached a peak of 120,000 in 1920 (Shepley Bulfinch, 1980).

Growth of the textile industry throughout New England and the Northeast was dramatic during the first half of the nineteenth century. In the 1840's, with water power in Lowell being used to its maximum, Amos and Abbott Lawrence, two of the Boston Associates prominent in the development of Lowell, built new mills farther down the Merrimack River in what became the city of Lawrence, Massachusetts. Later, Haverhill, Massachusetts and Manchester, New Hampshire also became major mill cities on the Merrimack. In addition, textile mills were built in Holyoke, Fall River, New Bedford and Chicopee, Massachusetts, Providence and Pawtucket, Rhode Island, Lewiston, Maine and at several locations in New York, New Jersey and Pennsylvania. By 1860, textile manufacturing was the largest manufacturing industry in the United States, with 70% of all U.S. cotton goods produced in New England. Capital invested in mill operations in Lowell grew from \$600,000 in 1822 to \$12,000,000 in 1840. By 1832, the net worth of The Appleton Company, alone, was approximately \$600,000 (American Textile History Museum Guide to Manuscripts, hereafter referred to as ATHM).

### III

During Francis Cabot Lowell's 1810-1812 visit to England and Scotland, he recognized the potential for textile manufacturing to provide a viable substitute for merchant trading as a way to build substantial personal wealth and security for him and his family. And this was clearly his goal. However, Lowell and Appleton also observed first hand the "unattractive by-products" of the industrial revolution as it had taken hold in Britain.

As Robert Dalzell notes (Dalzell, 1987):

"In England the social costs of industrialization had been high---staggeringly high by some accounts. Lowell described the situation succinctly in the letters he sent home from abroad. ....'We found the manufacturing towns very dirty.' And later he remarked with unwonted feeling on 'the great corruption of the highest and lowest classes, and the great number of beggars and thieves'."

"During an earlier trip, Appleton had written from England, 'Tis true that in this country money will purchase a thousand conveniences and attentions 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."

"What Lowell and Appleton thought they saw in England was a society moving perilously near a state of critical disorganization. As the rich became richer, the poor seemed to be growing poorer and, as Lowell found them, more 'jealous'. If that continued, it could only be a matter of time before a major upheaval occurred. In America the gap between the rich and the poor was much narrower than in England.... Someone as cautious as Lowell had not achieved all that he had in order to risk it on the wholesale disorganization of society. He had reached the point where he could reasonably hope to enjoy the gains he had won, to devote his life to something more than money-getting. But if the effort to do so brought him into open conflict with those beneath him in

the social order, if it led to a need for constant vigilance and endless maneuvering to protect his interests, then the game would hardly have been worth the candle."

"European technology might be used, but whatever threatened to produce discord and division would have to be eliminated.... The result, in short, could only be quite unlike anything Lowell saw in the very factories where he stood for hours studying the power loom."

Much later, in reflecting on the growth of the textile industry and his long participation in the venture, Nathan Appleton commented, apparently with some degree of satisfaction, on the differences in the operating characteristics between the U.S. and European textile industries. He also lays blame for later failures in the U.S. system on the "free trade policy" of the U.S. government. Appleton had become an advocate of high tariffs to protect U.S. industry, and in his view, U.S. workers, from the exploitative character of the British system (Appleton, 1858):

"The contrast in the character of our manufacturing population compared with that of Europe, has been the admiration of the most intelligent strangers who have visited us. The effect has been to more than double the wages of that description of labor from what they were before introduction of this manufacture [the Waltham-Lowell system of power looms]. This has been, in some measure, counteracted, for the last few years, by the free trade policy of the government; a policy, which fully carried out, will reduce the value of labor with us, to an equality with that of Europe."

Interestingly, Appleton wrote these words at a time which, looking back, was near the end of the experiment in industrial organization that he and Francis Lowell and the other Boston Associates implemented in Waltham and Lowell.

The solution to the problem of creating a permanent working underclass with the related undesirable effects observed by Lowell and Appleton in the British textile mills came to be referred to as the "Waltham System" (later the "Waltham-Lowell System"). In addition to the fully integrated manufacturing process, the Waltham-Lowell System established a unique relationship with its employees....a kind of "social contract", arguably with some sense of restrained self-interest on the part of the mill owners. It appears that Francis Lowell may have been the principal architect of this experiment in industrial organization (an early application of the modern idea of corporate social responsibility). As described by the U.S. National Park Service (Handbook #140), mill workers (commonly referred to as "mill girls") enjoyed some real advantages over their English counterparts:

Mill workers "...were mostly young farm women recruited from the surrounding countryside. To house these women, the companies built scores of boardinghouses. In the mid-1830s nearly three-fourths of the female workers lived in boardinghouses, usually under the charge of responsible older women.

Yet another feature that distinguished the Lowell mills in this period was the monthly payment of cash wages. Most other employers paid workers with credit at a company store or settled wages four times a year. In Lowell during the 1830s, a woman might earn \$12 to \$14 a month....She could never have earned this much money at farm work and quite likely had more ready cash than her father. It was common for young women to return home after a year in the mills with \$25 to \$50 in a bank account.

Wages were not Lowell's sole attraction for women. The city also offered social, cultural, and religious opportunities. In evenings after work, the women might attend a lecture, exhibition, or play. They could subscribe to magazines and newspapers that were probably unknown in the countryside. Some joined lending libraries or literary circles that offered intellectual stimulation. The city's clothing and dry goods stores put those in their home towns to shame."

In addition to these advantages, Lowell's plan suggested the mill girls would not become permanent employees. Instead, they would work in the mills for one to three years, after which they would return to their homes and resume their normal lives. In the process, however, they would save some money, gain some educational and social advantages and benefit from having lived in a more urban setting. All of this would encourage the development of a middle class instead of a permanent underclass of factory workers which Lowell and Appleton found so distasteful during their visits to England.

These advantages for mill workers did not come without a cost. As compared to almost any description of today's factory labor, working conditions in the Lowell mills were unpleasant, dangerous and demanding, and the hours were long. A visit to the Lowell National Historic Park gives a clear picture of the poor working conditions of mill workers in media presentations and live demonstrations in the restored mill facilities operated by the U.S. National Park Service. As an illustration, Appendix A shows a list of "regulations" from 1833 and a "time table" from 1853. Still, in comparison to conditions in England, the Waltham and Lowell mills provided attractive opportunities for "mill girls", at least in the early years.

Whether Appleton, Jackson, the Lawrence brothers and the other Boston Associates fully embraced Francis Lowell's idea is unclear. However, the relatively short-lived application of the "contract" with employees after the death of Lowell leaves some question as to the seriousness with which the others entered into a commitment to Lowell's idea. From his writings it appears Amos Lawrence, more than the other Associates, was concerned about the treatment of employees. Lawrence retired from full time involvement in management in 1830. He devoted much of the rest of his life to philanthropy and missions work (Dalzell, 1987). Nominally a Unitarian, Lawrence appears to have been motivated by biblical teaching. It may have been his faith that fed his apparent concern for the direction of the Lowell mill industry in its relationship with employees after the initial years of the development of the textile industry. Nathan Appleton lived and was active as a decision-making executive in the Lowell enterprise long enough (he died in 1861) to see the creation of the Lowell experiment through to its effective disintegration caused, in part, by severe labor unrest beginning in the 1830s.

Less than ten years after the first Lowell mill began operations in 1823 the social contract with employees and Lowell's experiment in industrial organization began to show signs of being breached. By 1845 the contract had been weakened, probably irreparably, by the stress in relations between labor and management. By 1860 the mill girls had left Lowell in large numbers, replaced by Irish, then French and other nationalities of immigrants. As Dalzell noted, "...the steady growth of a permanent labor force, largely propertyless and openly exploited; urban crowding, squalor, and disease: one by one they had been allowed to take their toll on everything that once had seemed so novel and promising at Waltham. Very simply, as an experiment in developing a

distinctive kind of industrialization---one that combined modern factory production with the familiar patters of traditional society--the Waltham-Lowell system was dead...."(Dalzell, 1987).

#### IV

The question that remains is why Francis Lowell's experiment in industrial organization failed? One explanation is that the restraint on self-interest was apparently abandoned by the Boston Associates (the mill owners) early in the experiment. As evidence, Robert Dalzell points to the research of Paul F. McGouldrick. McGouldrick documented profits as a percent of net worth and dividends as a percent of paid-in capital for the nine years from 1838 to 1846. The results of McGouldrick's work shown in the table below and in a continuation of the study indicate that for the period 1838 to 1861 dividends paid absorbed virtually all of the profits of the companies sampled (McGouldrick, 1986). This suggestion of strong demand for dividends by mill owners put pressure on mill managers to look for ways to produce consistent profits.

Profits and Dividends of Eleven Textile Companies, 1838-1846

<u>Year</u>	<u>Profits (Percent of Net Worth)</u>	<u>Dividends (Percent of Paid-in Capital)</u>
1838	3.7	0
1839	14.1	8.03
1840	4.2	7.45
1841	7.9	7.36
1842	2.3	2.89
1843	19.1	12.20
1844	17.1	16.99
1845	18.2	22.32

Source: Paul F. McGouldrick, *New England Textiles in the Nineteenth Century: Profits and Investment*, (Cambridge, 1968), pp. 81.

Another explanation relates to the growing U.S. population and the supply and demand for cotton goods. From 1790 to 1860 the U.S. population grew from 4 million to 31 million. However, the number of "spindles" in cotton mills (a rough measure of capacity) grew from 5000 in 1805 to 5,000,000 in 1860. The dramatic increase in capacity, some of it needed to meet initial demand, caused a sharp decline in the market price for finished cotton cloth, from \$.30 per yard in 1816 to \$.09 in 1850 (J&J Harper, 1969). The falling prices caused by increasing competition required that the Lowell mills reduce costs to remain profitable.

It is interesting to note a connection between mill managers' cost cutting actions and their accounting information systems. It is also important to remember that mill owners were "absentee" owners. Most of the members of the Boston Associates seldom

traveled to Lowell. They lived and worked in Boston and for decision-making relied on information provided to them by mill managers. Further, the business background of most of the Boston Associates was merchant trading; buying items in the marketplace and hoping to resell them at a profit. Most authors agree the evidence indicates that the primary cost and management control opportunities in the Lowell mills seemed to the mill owners to be labor (Johnson, 1991, Lubar, 1984). Raw cotton and other materials and most overhead costs seem to have been treated as a merchant trader might think of them, as commodities to be purchased and resold at a profit. Although David Porter's examination of the records of the Boston Manufacturing Co. and the Lawrence Manufacturing Co. indicate that material and overhead costs were calculated on a per unit produced basis (Porter, 1980), management attention appears to have been primarily focused on labor cost control. Previtts (1998) points out that cost systems of the time "...appear to have been unique, peculiar to each company, and ad hoc, versus incorporated into the double-entry system of records."

As mentioned above, in the design of the Waltham-Lowell system, mill workers were paid a fixed amount per month. There was not the direct tie between price and production as there would have been if workers had been paid on a piece-rate basis, (i.e. by the yard or by the pound, ...the pay system of earlier, smaller, less integrated textile manufacturers prior to 1810). Effectively, they were salaried employees. In the Waltham-Lowell system mill worker pay became a fixed cost. This more paternalistic payroll system was part of Francis Lowell's attempt to avoid creating a permanent underclass of mill workers (Gregory, 1975). However, as Johnson points out, when paid a fixed salary (in return for a fixed number of hours of work per week), employees "...surrender control over their labor time in return for a fixed income" (Johnson, 1991) Not surprisingly, the result was Lowell mill managers quickly became concerned to get as much as they could for their money. Labor was determined to be the most manageable input.

Appendix B is a copy of a production report from the Appleton Co. for March, 1843 (AHTM, Appleton Co. records, folder 2.51) (*The report is a bit confusing because it is labeled as a March report, but is preprinted to indicate it contains January information. It appears to be an old form used to report March information. This discrepancy in dates does not, however, affect a review of the data in the report.*) The report shows production volume and input costs. The only manufacturing conversion cost calculated is an average labor processing cost per pound in each department. Material input is given in pounds only and overhead costs are given in totals per year for clerks and the Mill Agent (the top management employee for the Appleton Mills resident on site in Lowell) and per day for other employees. Interestingly, the production report also shows percent reduction in employment, finished goods output and cost for the previous month as compared to the same period for 1842. By the 1840s, textile manufacturing was at times curtailed because of overproduction. Supply was outstripping demand.

The focus on labor as the primary manageable cost appears to have been the catalyst for much of the labor unrest in the Lowell mills. If mill owners and managers

had information about material cost per pound of output by department; if they had a system for allocating overhead cost to units of output; if they had budgeted (i.e. standard) costs and calculated price and efficiency variances for material, labor and overhead, they might have been able to identify costs that could be controlled more easily and reduced with less resistance than the cost of labor.

The pressure to reduce labor costs and the resistance by labor to do so became intense beginning as early as the 1830s. Mill owners reduced wages of mill workers, increased the speed of machines, required that workers tend more machines, offered bonuses to department "overseers" for higher labor productivity and increased room and board charges. In response, mill workers demanded restoration of lost wages and shorter work days. There were strikes by workers and petitions for better treatment. One strongly worded petition submitted to the superintendent of the Appleton Co. mills in February, 1834 demanded the reversal of a decision to reduce wages beginning March 1<sup>st</sup> and threatened a strike if the workers demands were not met (ATHM, Appleton Co. records, folder 2.9):

"We the undersigned considering ourselves wronged and our privileges invaded by the unjust and unreasonable abridgment of our wages do hereby mutually....engage not to enter the factory on the first of March nor after for the purposes of work unless the paper which causes our dissatisfaction be.....signed by the Agent of the Appleton Company [agreeing] that our wages shall be after the same rate as previous to the first of March."

In fact, the strike took place, but the company did not change its decision. Ultimately, the wages were reduced and the mill workers returned to work at the lower rate. Later strikes in the 1830s and 1840s were more successful, but demands were not easily won.

Appendix C is a copy of a letter from the Appleton Co. treasurer to Nathan Appleton, president of Appleton Co., dated September 2, 1853. This letter is particularly interesting because the treasurer is making a case that management should agree to a reduction in work hours to meet the demands of workers. There seemed to be a national trend in that direction and some concern about the political cost of not agreeing to the reduction (ATHM, Appleton Co. records, folder 4.53).

Another letter in the Appleton Co. records, dated September 24, 1850, (ATHM, folder 4.94) is from mill superintendent, George Motley, addressed to the company treasurer asking for reconsideration of a proposed wage reduction because he feels good workers will leave the company for higher wages at other mills to be replaced by poorer workers (probably the workers displaced at other mills by the Appleton employees who leave for better pay). In his letter Mr. Motley makes the point that there may be no net benefit to the company from reducing wages. The company may lose skilled, efficient workers, and in return, find that only lower skilled, less efficient workers will work for the lower wages being proposed. Mr. Motley appears to have understood the trade-off between labor rate and labor efficiency and was arguing, in effect, (even if the accounting information was not available to support his case) that the result of eliminating an unfavorable labor rate variance may be to invite an equally unfavorable labor efficiency variance, along with lots of labor unrest.

It is interesting that in both of these cases management felt some obligation to consider worker discontent in the process of making decisions, indicating that mill workers had gained some bargaining power. It is also interesting that both of these letters were written in 1850 or after, when mill management had begun to lose the "mill girls" because of poor working conditions and had replaced them with Irish and French immigrant workers. There is no indication, however, that mill management willingly or easily assented to worker demands, even in the best of times.

## V

The Waltham-Lowell system was a noble experiment and reflected biblical teachings about relationships with employees, even if the architects of the system may not have designed the system with careful reference to Scripture. A final question is what could have been different that would have preserved the system? Some answers can only be suggested. Had Francis Lowell not died so soon after the system was implemented, he might have served as a stronger influence on the other Boston Associates to maintain the principles on which the system was based. Had someone like Amos Lawrence, with at least some sense of Christian principles to guide him, exercised more influence, maybe a Micah 6:8 kind of justice and love model would have emerged. Had there been more sophisticated cost/management information systems in place, mill owners might have recognized the value of treating the mill workers with more honor and respect and identified other cost savings opportunities. Had mill owners continued Francis Lowell's idea of restrained self-interest, a larger share of profits might have been retained in the various companies to be used for replacement of plant and equipment and technological innovation, helping to insure the long run survival of the business enterprise in Lowell.

Nathan Appleton's biographer concluded "...these innovators aimed to establish a humanitarian though paternalistic system. That it soon became less than ideal was a product of conditions not known to the founders: the ignorance of the age, the passage of control of the industry into the hands of men of smaller vision, and the absenteeism of the founders. The original entrepreneurs largely lost contact with the changing conditions in the industry and failed to see the defects of their system." (Gregory, 1975) This is an interesting conclusion, and one with some merit. However, given Nathan Appleton's long involvement with the Lowell enterprise, starting with his discussions with Francis Lowell about textile manufacturing during their visit to England and Scotland and ending with his death in 1861, well after the failure of the Waltham-Lowell system should have been evident, it is surprising that his biographer provides little more than a mild hint of criticism of his actions and his responsibility for the failure of the Waltham-Lowell system. It seems clear that Appleton did not carry out his and Francis Lowell's vision for a successful textile manufacturing system beyond the first few years in Lowell.

Of course, the suggestions of what could have preserved the Waltham-Lowell system and the textile industry in New England, and any criticisms of Nathan Appleton or his contemporaries cannot be fully validated without the ability to relive the experiences of the mill owners and workers of the early 1800s. However, the Lowell experiment in industrial organization, the Waltham-Lowell system, can serve as a model for business design in the twenty-first century as well as it did in the nineteenth century. In fact, we can look at present day practices such as participative management, employee ownership, corporate ombudsmen, "open book" management, corporate codes of ethics, wage & hour and health & safety and minimum wage laws, to name a few ways that employees are honored and valued for their contribution to the success of businesses. We can also point to far better information systems, providing fast, accurate and detailed feedback about past management decisions, and information that has good predictive value as well. It may be that a Waltham-Lowell system has a much better chance of success today than it did almost two centuries ago. However, there also needs to be the will and commitment to make the system succeed, just as was needed then. It is interesting to observe that implementing biblical principles of management and stewardship in a business environment are not only honoring to God, but they make simple economic and management sense, and may also advance the self-interested financial goals of management and shareholders.