LANDSCAPE PAINTINGS and prints showing early manufactories towering over rivers or nestled into valleys, announce the gradual but momentous shift taking place in England in the late eighteenth and early nineteenth centuries and in the USA some fifty years later, from agrarian to industrial economies (see Plate 1).

Yet these images are only a small step away from the landscape paintings of Claude Lorrain, or an early Turner, where the Arcadian or the sublime beauty of nature embraces civilisation and dominates the senses. Images of early manufactories are arresting not only for their aesthetic and symbolic values, but also for what they do not tell us about the reality of life in these early factories – twelve or more hours of wearisome work, for men, women and children, in unventilated and often unsafe spaces. They do remind us, however, that most early factories were built in the countryside or on the edge of towns where operatives might have enjoyed their daily recreation on the walk to work, or in the factory yard at lunchtime on a fine day if the wind blew the smoke away from them. Workers employed and living in one of the model factory villages or towns emerging in England in the late eighteenth century and in the USA in the early nineteenth century, might have enjoyed cleaner air and the opportunity to supplement the family diet with fresh vegetables. These paternalistic self-contained communities, mostly designed with good quality architecture around a landscape plan that included gardens or allotments, offered working and living conditions above and beyond those driven by legislation (Figure 1.1).

As industrial towns grew rapidly in England in the early nineteenth century, factories and housing jostled for space and clean air in green open space became a luxury for urban mill workers. In America, early industrialists attempted initially to avoid the poor conditions of British factories, but as industrialisation accelerated following the end of the Civil War in 1865, little attention was given to architectural or landscape
aesthetics in the rapid and ad hoc expansion of industrial sites. This began to change in both nations towards the end of the century, partly aided by the coming of electricity to industry, which made it easier for industrialists to relocate factories from urban centres to the more spacious suburbs and gave more flexibility to design. Companies now had more space for beautifying their factories and the landscaping of new industrial buildings in some areas became essential to the aesthetic coexistence of residential and industrial development or the acceptance of a factory in a rural setting.

By the end of the nineteenth century, paternalistic industrialists not building company towns or villages attempted to provide model conditions in their works for both altruistic and commercial reasons. Many corporate leaders, sociologists, welfare professionals, architects, landscape architects and engineers believed that high quality recreational space contributed to efficient, productive and respectable institutions, well regarded by consumers, where workers would be motivated, and even proud to work. An attractive factory was also thought to attract female workers who were in greater demand and in shorter supply towards the end of the century. In landscaping their factories, entrepreneurs in the early twentieth century were in some respects returning

1.1 View of Humphreysville (later Seymour), Connecticut, as it was in 1812. This model mill village was named after General David Humphreys who built the first large woollen mill in the United States here in 1806.
The factory in a garden

to the more Arcadian landscapes of the early Industrial Revolution, or
recreating an imagined domestic ‘idyll’ of an earlier industrial com-

dunity. Rural factories and model industrial communities provided the
foundations on which the twentieth-century ‘Factory Garden Movement’
was established and flourished. But by the new century, factory landscap-
ing was no longer driven by paternalism but by pragmatism.

Landscapes of the early Industrial Revolution

When the first large, mechanised factories were built in England, most
had ‘natural advantages’ as they occupied rural landscapes or were built
as extensions to farmhouses or sited next to the owner’s country house.²
Developers often exploited the aesthetic and dramatic possibilities
presented by the necessity for fast-flowing water. Some of the earliest
powered water mills, such as the Lombe Brothers’ silk mill, built in the
early 1720s along the banks of the River Derwent, near Derby, or the
Darbys’ iron mills at Coalbrookdale situated in a deep river gorge, look
picturesque, even sublime, in prints and drawings, although those quali-
ties were exploited for artistic and no doubt promotional effect.

Unlike most factory owners of the later nineteenth century, who
chose to live at some distance and out of sight from the smoke and labour
at their factory, the eighteenth- and early nineteenth-century entrepre-
neneur often displayed his enterprise proudly as a significant part of his
estate.³ The landscape architect Humphry Repton made much of the
picturesque qualities of Armley Mill in his re-design of Benjamin Gott’s
mill near his county seat, Armley House. Repton flattered Benjamin Gott
by featuring his flagship mill in the ‘after’ view in the Red Book of 1810
where the imposing building presented an ‘eye catcher’ backdrop to the
water meadows, while up the hill sat Gott’s country seat, Armley House.⁴

Sir Richard Arkwright, in building his second mill, Masson, from
1783, embellished it with Palladian windows and a cupola and shortly
afterwards, commissioned a gothic-revival country house just across the
river from the mill.⁵ The mill cannot be seen from the house, but it is
clear from walking around the gardens today, that views of the manufac-
tory from the river walk were designed to impress on visitors Arkwright’s
dual position as country gentleman and entrepreneur.

Earlier industrialists found some more unusual advantages in the
close proximity of the factory to their country house. In 1746, the Quaker
industrialist William Champion moved his works from the centre of
Bristol to Warmley in Gloucestershire and built a zinc-smelting factory
next to his Palladian residence. In the gardens he made around Warmley
House from 1746 to 1769, Champion recycled by-products of the
zinc smelting processes that he had invented and patented, to provide
unusual colours, patterns and textures to his summerhouse, garden wall and grotto. The whole complex is an ‘industrial utopia’ for the plan clearly indicates that his house, the factory and the pleasure gardens are integrated, while the lake performs the dual functions of ornamenting the garden and supplying water to the works. Originally the water was circulated from the factory back to the lake via the grotto, forming a cascade, an allusion to Italianate landscape gardens with their sensory water features, to which the landowning elite aspired in this period. The startling statue of Neptune, also partly constructed from clinker waste from the factory, towers over the lake and provides the essential, if somewhat crude statement of classical mythology to the garden (Figure 1.2). It seems likely that Champion made his garden features to impress clients as well as family and friends, as the house, factory and garden are so clearly unified, functionally and aesthetically.

We know little about the experiences and feelings of employees at these early factories, but as most of the workforce came from rural areas in the early history of factory production it is unlikely that the physical setting had much influence on their choice of workplace (where they had a choice). However, the buildings in their sheer scale must have been impressive, or indeed oppressive. Precedents for factory buildings
ranged from the austerity of prisons and orphanages, often similar in terms of organisation and management, to the landed estate or royal palace, but all these models communicated a clear message to the workforce that they were establishments that employed strict rules and hierarchies.

Between 1780 and 1850, when factories in Britain were more commonly built in towns, landscaping tended to be reserved for the manufacturer’s private house, which was often situated in the countryside far from the overcrowding and pollution of the industrial town. In a study of conditions in Manchester in 1844, the French economist Léon Faucher observed that the merchants and manufacturers lived in detached villas in the midst of gardens and parks in the country. ‘The rich man’, he wrote, ‘spreads his couch amidst the beauties of the surrounding country and abandons the town to the operatives, publicans, mendicants, thieves and prostitutes’. Reformers blamed the loss of rural values and healthy environments for the ill health and misery of the factory workers and the countryside is frequently a metaphor in literature for human happiness and dignity, the place where God resides.

Factories were not exclusively in the country or the town but were often situated just outside towns, as were the Turton Mills, near Bolton in the mid-1800s, owned by the liberal Quaker brothers Edmund and Henry Ashworth. The journalist William Cooke Taylor’s account of his visit to the mills in 1842, though idealised (he supported factory owners against their critics), suggested that some mill owners were at pains to beautify the factory with planting. Having dismissed the quantity of smoke in the valley as ‘pleasing and picturesque’, he described the mill, built at the bottom of the ravine, just under the owner’s residence:

Fruit trees, unprotected by fence, railings or palisade, are trained against the main wall of the building, and in the season the ripe fruit hangs temptingly within reach of every operative who goes in or out of the mill. There is not an instance of even a cherry having been plucked, though the young piecers and cleaners must pass them five or six times a day.

Cooke Taylor fails to acknowledge the punishment that might have ensued should an operative have been caught stealing the fruit, but this is clearly an attempt by the Ashworths to make the factory environment more attractive.

Aesthetic beauty, scenic views and the exploitation of industrial by-products for gardens all became factors in the design of the industrial landscape, but more for the benefit of the corporate image than for the employee. However, at some of those works that became known
Paternalism and philanthropy at the model factory

The idea of the model factory emerged at the end of the eighteenth century and evolved through the nineteenth to improve conditions in industry and to meet a growing perception of the importance of environment to the image of a company. The concept became fully articulated by 1900, but in its evolution, a definition of a model factory was never fixed, as conditions varied according to the general economic and technical knowledge of the time and to changing legislation on industrial conditions.13

From the start of the modern factory system and even before, employers experimented with ways of increasing production through a consideration of the needs of their workforce.14 No doubt a combination of philanthropy and commercial considerations inspired better than average conditions in factories and there are a number of well-known examples of ‘enlightened’ patrons and employers, who in the early years of the Industrial Revolution, ran industrial communities that might be considered model by the standards of the day. Samuel Greg, at his factory at Quarry Bank Mill, founded in 1784 southwest of Manchester, fed his apprentices on fresh produce that they grew in the garden of the Apprentice House, gave them rudimentary education and built cottages for his workers with good-sized gardens where they could grow their own vegetables (Figure 1.3).

However, conditions were far from ideal; discipline was strict, the working day was twelve to thirteen hours and when the Ten Hours Movement campaigned for shorter hours, Samuel’s son, Robert Hyde Greg, opposed it.15 Other industrialists went to great lengths to build architecturally or socially innovative industrial communities such as Jean-Baptiste André Godin’s foundry at Guise in France, which he based on the principles of the utopian socialist Charles Fourier (1840s), or Roberts Owen’s mills at New Lanark.16 (The familistère at Guise, modelled on Fourier’s theory of a communal building, the phalanstère, influenced later industrial communities such as Pullman discussed in the next section.) For many aspiring industrialists, the most urgent problem in establishing their factories was how to attract labour (often in limited supply), and once they had established a workforce, how to assert control over people used to the less rigid systems of agricultural labour and, particularly for American employers, how to socialise and Americanise newly arrived immigrants.
These were urgent issues for Robert Owen, who, after taking over the management of the New Lanark mills in Scotland from 1800, took radical measures to recruit labour (many were orphans) and to get the best out of his undisciplined workers, many of whom were brought up in rural surroundings dependent on tight social groups and years of tradition. Owen reduced working hours to ten and three quarters, a short working day by the standards of the time and provided education, unemployment benefit, allotment gardens and picturesque ‘walks’ along the banks of the River Clyde (Plate 2). Owen’s systems, one of the most innovative being an emphasis on music and dance at the factory inside and outside, were based on his theories of human character and behaviour that he outlined in his book, *A New View of Society or Essays on the Principle of the Formation of the Human Character and the Application of the Principle to Practice* (1813–14). Owen compared his workers to living machines, which needed just as much care as the machines in the factory. People’s characters he argued, are not innate, but are shaped by their environment. So successful were Owen’s methods in running a factory and publicising his methods that visitors flocked to see it, including the Russian Tsar. New Lanark, with its shorter working hours, education and recreation spaces, was model by the standards of the day.
The Americans, who industrialised later than the British, tried, initially relatively successfully, to avoid the overcrowding and poor conditions in British industry and debated fiercely the question of how to drive profitable companies while maintaining the health and moral well-being of the workforce. Thomas Jefferson believed that a solution lay in building small-scale manufactories within a traditional agrarian environment and regarded his nail factory at his estate at Monticello in the 1790s as integral to the plantation’s economy. Other industrialists experimented with building model industrial towns. Jefferson’s friend, Colonel David Humphreys had toured European factories and seeing a need for reform, set out to establish a model mill and mill village in the country at Humphreysville (now Seymour) in the first decade of 1800s (see Figure 1.1) and attempted, through paternalism, to shape its social order.

According to Margaret Crawford, historian of planned communities, Humphreys created ‘the first system of industrial labor management in America’, but she does not point out that a very similar ideology of management systems was taking shape concurrently in Scotland. There are striking similarities between Humphreysville and New Lanark in that both men employed the ‘carrot and stick’ systems of rewards and punishment, and in the layout and management of the village they emphasised fresh air and open space. Humphreys, like Owen provided housing with gardens and he organised community theatrics. Both men made military style drill compulsory for the factory boys but Humphreys went further and established a private militia. Conditions at Humphreysville, although highly authoritarian, were considered by contemporaries to be ‘model’ by the standards of the day.

Despite the apparent success of Owen’s methods and systems at New Lanark, and an increasingly vociferous reform movement, conditions in factories worsened. The factory ‘hell’ and industrial unrest of early nineteenth-century Britain is notorious. Calls for reform that began in the late eighteenth century culminated in the passing of the first of the Factory Acts in 1802, which set standards of ventilation, sanitation, hours of work and compulsory education in working hours for children. These rules only applied to large factories and there was widespread evasion of the Acts, but also plenty of scope for factory owners wishing to exemplify, to create model conditions that exceeded the requirements of the Acts. British historian J. T. Ward provides a number of examples in his volumes, The Factory System, including a mill in Bradford run by a Mr John Wood, who employed 600, mostly girls. Wood provided education and a doctor and he allocated an hour for dinner followed by recreation in the factory yard (Figure 1.4). In the last quarter of the nineteenth century, a paternalistic approach in factories was common and certain provisions for workers, such as education, were almost commonplace.
By the mid-nineteenth century, the factory was just one of many institutions going through a period of reform that was affecting all towns and cities. A combination of benevolence and a desire to create stable and respectable urban environments and increase affluence drove industrialists to promote and fund civic amenities such as libraries and parks, town halls and public health, and often it was this group that pioneered reform. However, unsanitary conditions and ill health prevailed in industrial towns.

Overcrowded and squalid conditions in Bradford, Yorkshire inspired Titus Salt to build a new factory and factory village, Saltaire in the neighbouring countryside from 1851. Historians frequently applaud Salt and his architects Lockwood and Mawson for creating the most comprehensive and successful model industrial village of the time, which unified factory, village and park. Based on the theory that environment could shape morality and behaviour, Saltaire was a turning point in the evolution of the model factory and factory village. This was due to the design and amenities of the state-of-the-art factory and for the attention to detail of the site’s plan, as well as the quantity and quality of the buildings and amenities supplied for the workers’ use. These shaped and controlled all the social and cultural activities of the workers’ lives, from washing and bathing, to education, recreation and entertainment.
The factory in a garden

By the mid-nineteenth century, the factory was just one of many institutions going through a period of reform that was affecting all towns and cities. A combination of benevolence and a desire to create stable and respectable urban environments and increase affluence drove industrialists to promote and fund civic amenities such as libraries and parks, town halls and public health, and often it was this group that pioneered reform. However, unsanitary conditions and ill health prevailed in industrial towns.

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1.4 ‘The Dinner Hour, Wigan’, 1874, by Eyre Crowe. An idealised view of factory girls making the most of the factory yard in their lunch hour in the early 1870s.

The architecturally splendid Italianate mill, a ‘palace of industry’ and celebrated as ‘the largest and best contrived of factories’, was one of the first industrial buildings to be illustrated in the highly regarded architectural journal, *The Builder*. The factory workers, though paid no more than average, had a sickness insurance scheme to which the company contributed, a dining hall and annual works outings to the seaside or other destinations, including Salt’s mansion. As well as model conditions in the factory, the village where most of the operatives lived supplied all needs: houses, shops, baths, school, institute, hospital, eleven acres of park, allotments and a Congregational church (Figure 1.5). Salt exerted complete social and cultural control of his workforce by establishing an integrated industrial site, ‘a capitalist republic with a benevolent dictator’, according to historian R. J. Morris. His methods worked from his point of view, for there was little industrial unrest at the factory and only two brief strikes in the first thirty years of the mill’s life. However, as industrialisation accelerated in America and industrialists built model company towns, it became clear that exceptional environmental design and welfare provision did not prevent industrial unrest.

Historians agree that conditions in the factories and factory villages in America were better than in Great Britain in the earlier part of the
American Industrial Revolution, but had deteriorated by the last quarter of the nineteenth century.\textsuperscript{30} American industrialists had different considerations in attracting and managing their workforce, due to the scale of the country, a relative lack of urban centres and a labour force that consisted increasingly of immigrant groups often hostile to each other. It was, therefore, more common than in England for manufacturers to provide housing from the start.\textsuperscript{31} Entrepreneurs regarded the creation of company towns as a solution to social exploitation and degradation of the landscape, although the reality expressed the inherent tensions of capitalist production. From the 1790s, large mills were established in Massachusetts, the most renowned being those at Lowell (from 1813), which was regarded as a model company town by visitors including Charles Dickens, who visited in 1841.

Dickens found the factory girls at Lowell, many of them farmers’ daughters, healthy and cheerful and marvelled to see them attending evening lectures and classes, playing the piano supplied by the boarding houses, and reading books from the town’s library.\textsuperscript{32} They seemed to acknowledge the value of nature to the quality of life, for one edition of their monthly magazine, \textit{The Lowell Offering}, included an editorial on plants and flowers in the mill, symbols of home, hope and chastity perhaps.\textsuperscript{33} Engravings of the textile town of Lowell, although idealised, suggest that landscaping and tree-planting contributed to the aura of order and respectability that was deemed necessary to persuade the fathers of the mill girls that their virtue would remain intact.

Despite these ‘model’ conditions, hours were long and discipline was strict.\textsuperscript{34} Margaret Crawford has argued that Lowell was never designed as a model company town as it had no ‘conceptual order’ and that the girls’ extra work activities were organised on their own initiative and supported by the church rather than by corporate philanthropy.\textsuperscript{35} If Lowell was not a model factory town, conditions there might be considered to be model, but even these did not prevent industrial unrest, for in 1834 the Lowell girls went on strike against a wage cut.

The American Industrial Revolution was still in its early stages by 1860,\textsuperscript{36} and most factories were small scale, but after the Civil War, industrialisation was rapid (between 1860 and 1900, industrial production increased in value from $200 million a year to $2,000 million) and by 1894, American industry was producing twice as much as British industry.\textsuperscript{37} Businesses amalgamated to create much larger industrial units and as industry grew so social problems spread, with industrial unrest and often violence. In the 1880s and 1890s, strikes were frequent with over 24,000 industrial disputes between 1880 and 1900 and between 1902 and 1904 alone, 180 union men were killed, 1,600 injured and over 15,000 were arrested in the course of strikes.\textsuperscript{38} The infamous strike...
at the Pullman Palace Car Company in 1894 is significant because it took place at a company that was considered to be a model employer. George Pullman, in an attempt to use design and authoritarian paternalism to prevent industrial unrest, built an initially much praised model factory and town outside Chicago from 1881, but the scheme ended in failure and derision for the manufacturer.

The landscaping of Pullman, Illinois

George Pullman, the creator of the Pullman sleeping car, championed the idea in the USA of employing a professional landscape architect to beautify a factory when he began to plan his company town outside Chicago in 1880. Most likely inspired by a visit to Saltaire in England in 1878, he appointed an architect, Solon S. Berman and a landscape architect, Nathan F. Barrett (the same duo who had remodelled his house and garden) to integrate the factory and town into a complete functional and aesthetic whole. It was the first time in American history that an architect and landscape designer collaborated on laying out a whole town. The Boston Herald described the town in August 1881 as ‘a professional dream come true’ and the combination of design skills undoubtedly contributed to the aesthetic and symbolic impact of the site. The landscaping of Pullman set some important precedents in the idea of factory landscaping but the town became both a model and a warning in the USA and in Europe for how good design had to be combined with fair social practices to contribute to business success.

In plan, Pullman town is not unlike Saltaire, with its grid pattern of rectangular blocks and the factory situated on one side, slightly separated from the village and surrounded by open space (Pullman was built on the edge of Lake Calumet). The layout of Pullman, however, was more sophisticated, with some resemblance to the Beaux Arts ideal of town planning, exported from Paris and gaining popularity in the USA, giving grand spatial vistas and axial boulevards. Pullman also offered desirable facilities for residents and visitors, including the Arcade Building with theatre, library, post office and bank, and the Hotel Florence, named after Pullman’s favourite daughter.

Both factories were located next to the railway line (and the canal in the case of Saltaire) for practical reasons and for promotional ones, for those travelling past could marvel at the impressive structures. An artificial lake in front of the factory building, bounded by a drive lined with trees and shrubs, gave even greater status to the Pullman plant and suggested a country house set in an English landscape garden. Pullman, like Champion at Warmley and later industrialists, exploited the functional
as well as the aesthetic potential of their water supply, for Lake Vista was as the cooling pond for the great steam engine (Figure 1.6).

The level of sophistication of the landscaping at Pullman and the suggestion of a pleasure garden in the area around the factory makes the scheme innovative in the evolution of the factory garden. An informal sweep of parkland bounded by roads and intersected with footpaths connected the factory to the town and beyond the hotel lay a formal garden or small park (Figure 1.7). The lushly planted Arcade Park and traffic islands were a fine example of the power of landscaping and planting to create soft and sensuous effects within a juxtaposition of formal layout with naturalistic planting.

One journalist from the Mercantile & Financial Times arriving by train in 1895 described the view as ‘beautiful beyond description and without a parallel in any industrial centre in America or the world’. He applauded the ‘white graveled walks and grassy lawns, studded with green shrubbery and set here and there with beds of bright hued flowers’. All this was made possible by the six acres of nursery garden and greenhouse that supplied plants for the town landscapes and for the residents. Visitors
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The Pullman workers were also well supplied with sports grounds, although these were placed out of sight of the factory beyond the town on fifteen acres of ground on the banks of Lake Calumet and on an artificial island. The facilities there were excellent by the standards of the day and the grounds became a popular sporting venue for national as well as local competitors.46

Pullman provided his workers with seemingly abundant welfare programmes including accident insurance, medical treatment, education, athletic clubs, a company band and social clubs.47 But Pullman was not a popular man for the workforce had no control over the management of the town or the amenities. They bitterly resented the ways that their domestic and social, as well as their working, lives were overseen and there were no means for them to communicate complaints to their employer.48 By all accounts the town hosts, Mr and Mrs Doty, employed by Pullman to look after visitors, were also warranted to spy on the employees and enforce the rules with the penalty of dismissal and expulsion from the town for misdemeanours. A drastic wage cut fuelled the strike of 1894 when the generous landscapes provided plenty of space
The factory in a garden

for strikers to assemble. Utopia turned to dystopia as the federal troops were called in to take control, thirteen people died, fifty-three were seriously injured and 700 freight cars burned.49

After the strike, poor industrial relations continued. Algie M. Simmons (who wrote a study of personnel practices) visited Pullman in the late 1890s, and reported: ‘nowhere have I seen such concentrated hatred against an employer’. More than a third of the workforce chose to live outside the town because they resented the rules and wished to buy their own homes or rent from another landlord.50 In 1907, the Illinois Supreme Court ordered the Pullman Company to sell all the non-industrial property in the town.51 The town of Pullman is largely preserved (it is now a National Historic Landmark), but the area around the factory is derelict and the lake filled in. The Historic Pullman Foundation is battling to preserve what is left of the landscapes, which remain relatively intact, although without their former glory.

Factory utopias in Britain

As American industry grappled with increasing social unrest, British industry had recovered from the worst of the social problems brought by industrialisation and the relationship between capital and labour was relatively stable. Experiments and theories in industrial organisation were reaching a consensus on methods of factory organisation and the concept of the model factory evolved into more than just basic educational and recreational facilities. The historian F.M.L. Thompson has argued that by the 1850s more substantial and expensive forms of paternalism were common in larger firms, including reading rooms or libraries, occasionally bathhouses and later in the century, gymnasias and works canteens. Larger factories were becoming complete social institutions, often a focal point for a community providing music and other clubs and social events.52

The Utopian socialist, designer and manufacturer William Morris became a champion of the model factory and an inspiration for factory gardens when he published an article ‘A Factory as it Might Be’ in Justice Magazine in 1884, partly inspired by his printing and dyeing works at Merton Abbey. Morris described his welfare provisions, ideal by the standards of the day, where employees enjoyed a wholesome environment, including a pretty garden by the stream, allotments and other recreation and education opportunities. Borrowing largely from Ruskin, Morris was characteristically contradictory, arguing that a factory should stand in gardens ‘as beautiful (climate apart) as those of Alcinoüs, which should be for beauty’s sake, not for profit’. Morris did not like to mention any commercial motive in nurturing his garden at Merton Abbey, unlike...
his more pragmatic disciples, industrialists, planners, politicians and other reformers who sought to improve working conditions.

Morris’s article was subsequently published as a pamphlet and as his readership was broad and his reputation wide, it is likely that enlightened entrepreneurs building factories in the late nineteenth century were aware of his arguments and ironically he might have unwittingly contributed to a greater public acceptance of the factory system. Within a decade of his article being published, larger factories began to add significant amenities, such as the works’ sports and recreation ground, and at some works, a pleasure ground made a pleasant space for those who wished to walk, rest or eat lunch outside. Some employers made exercise compulsory for the youngest workers and provided allotments for employees’ children. From 1878, the Cadbury Brothers, George and Richard, inspired by some of the most influential social reformers of the age and by their Quaker values, which encouraged enterprise and wealth accumulation for the benefit of social reform, pioneered these types of landscapes. They created the most celebrated model factory in Britain where the welfare of their workforce was paramount.

The Cadburys, closely followed by a fellow Quaker, Seebohm Rowntree in York and other reforming industrialists such as William Lever (later Lord Leverhulme) at Port Sunlight, were masters of benevolent manipulation or paternalism, and their works at Bournville embodied the epitome of a model factory. Although George Cadbury built a model village adjacent to the factory, his genius as philanthropist and developer was ensure that the village and factory were independent. Bournville village was not a factory village in the true sense because it was managed separately from the factory and less than half of the residents worked at the chocolate factory which it had its own amenities.

William Hesketh Lever’s village Port Sunlight, built in the 1890s near Liverpool for his employees at the Sunlight Soap factory was an integrated industrial site because all the residents of the village either worked or had associations with the factory. Port Sunlight, planned by the architect William Owen, became a highly influential factory village and one of the most visited, including by many of the industrialists whose factory gardens and parks are discussed in the following chapters. Outdoor amenities were similar to those at Pullman, although on a smaller scale, and the design of housing, community buildings and landscape was initially based on the Arts and Crafts ideal of an English village landscape. The picturesque village offered a football ground, rifle range, tennis courts, bowling green and allotment gardens and the villagers could relax in a small informal park. By 1919, the company provided a 120-acre recreation ground and an outdoor swimming
The factory in a garden

Lawns, trees and flowerbeds linked the grand classical façade of the works offices to the village houses in an incongruous juxtaposition, in a landscape scheme that lacked the dramatic harmony of the Pullman landscape.

Although Port Sunlight and Pullman were built initially to different design models, on the lines of Arts and Crafts and Beaux Arts respectively, they were very similar in the way they were organised and managed. Both communities had to conform to strict rules, although Lord Leverhulme’s more paternalistic rather than authoritarian approach and the consistent success of the company meant that his workforce was more stable and their attitude to their employer largely compliant. However, Port Sunlight residents had to conform to the rules and gardening, for example, was almost compulsory. The village offered copious garden plots in large allotments which could be rented for a small fee. These lay within the blocks of housing enabling surveillance from nosey neighbours. Residents tried, initially, to make the large gardens at the front of the houses their own, but a preference for chicken runs, dust-bins or drying washing there did not comply with the aesthetic or social standards of the estate office. The authorities banned the erection of fences and all the village landscaping was taken over by the gardeners of the company landscaping department, who planted lawns, flowerbeds and trees to create a uniform look. The houses obscured the messier, utilitarian allotments (where chickens, but not pigs were allowed), so that the picturesque order of the scene would not be disturbed.

Cadbury, Rowntree and Sunlight Soap were all examples of light industries exploiting an insatiable demand for packaged and affordable commodities in a growing consumer market at the turn of the nineteenth century. To attract a high quality and stable workforce and to promote good industrial and public relations, model employers built well-designed buildings, provided high quality recreational educational and other amenities, including gardens and parks, paid higher than average wages, and increasingly offered other benefits such as pensions and sometimes a form of profit sharing. Toward the end of the nineteenth century, it was seen to be good practice to promote a high moral tone at work to attract and keep the best workers. Some, such as Seebohm Rowntree believed that the workplace had an even more beneficial influence on the character of the working classes than the church and was as important as schools in shaping the characters of youth. As demand for high quality female employees increased, and supply waned, the need for respectability in the workplace to attract the best workers was an important factor and this became even more important during the First World War when companies were recruiting in competition with munitions factories that tended to pay high wages.
With more light industries needing employees, particularly in foods and engineering, which tended to involve boring repetitive work, women workers looking for a job between school and marriage were seen as desirable, partly for their malleability due to social and political inequalities and because they were cheaper. For many women and their husbands and fathers, work was seen as inferior to domestic life and simply a preparation for marriage; therefore, by the early twentieth century, for most women, life in employment was short. Women were also sometimes put off work by trade unions that tended to be particularly hostile to women in skilled or semi-skilled jobs. To attract the best female workers, therefore, companies boosted their reputations with attractive buildings and gardens, plenty of social and cultural life, separate entrances for men and women, staggered working hours and by employing a female welfare or social manager.

Ross McKibbin has shown how some companies in the early twentieth century, seeking more female employees in the growing numbers of light industries, used ‘art’ to attract the choosy female worker. Girls and their parents were drawn to companies with ‘taste’, for that attribute, they thought, brought with it respectability and class. It was not uncommon to see works of art, curtains and other domestic luxuries including pot plants and vases of flowers in dining rooms and rest rooms at factories employing a large proportion of women. Flowerbeds and shrubs around the factory buildings, such as the elaborate bedding displays at Sears Roebuck & Co. in Chicago, added further suggestions of beauty and femininity.

By the early twentieth century a more politicised working population, both male and female, with increasing expectations of upward social mobility and a general presumption of better standards and conditions at work was driving industrialists to provide attractive workplaces with good pay and conditions. By this time, the workforce, particularly in America, was less amenable to being patronised by a benevolent father figure and factory design and management began to be organised into fully fledged professional systems.

**Welfare capitalism and the modern factory**

By 1920 the idea of a modern factory was no longer defined by a paternalistic concern for the welfare of the workforce, cared for and overseen by a benevolent father figure, but as a professional social and economic system with close worker involvement, and organised by professional management systems. Historians agree that American industrialists were at the forefront of this pioneering work.
After a period of rapid industrialisation in the late nineteenth and early twentieth centuries, conditions in some American factories and towns had become reminiscent of Dickens’s England: crowded, filthy, with dangerous areas peopled by impoverished, ill-nourished and unhealthy industrial workers. While the nation grew wealthier, industrial workers’ lives remained insecure with many suffering low wages, and there was little recourse to welfare. Yet alongside some appalling conditions, industrialisation was creating a period of unprecedented economic prosperity, which provided the conditions for reform. In industry, reform took the form of ‘welfare capitalism’, thought by employers to be the best way to prevent labour unrest.

Some historians have argued that a prevention of unionisation was the underlying motivation of welfare capitalism and many companies sponsored ‘company unions’ to discourage trade union membership. This is too simplistic a view, however, since many employers with active welfare programmes supported unions, including Cadbury, where the directors actively encouraged their workers to join trade unions. Welfare capitalism was motivated by a need to improve relations between employer and employee and to socialise workers, to promote stability, loyalty and therefore profit. Reforms included improving workspaces and conditions, extending recreational facilities, profit sharing, life insurance and pension schemes, and many companies gave responsibility for running the amenities to employees, allowing them a semblance of control over their working lives in an attempt to maintain stability. The range of schemes for welfare was so diverse that a US government study in 1916 defined it as ‘anything for the comfort and improvement, intellectual or social, of the employee, over and above wages paid, which is not a necessity of the industry nor required by law.’

The National Cash Register Company (NCR), the ‘pioneer firm in industrial betterment’ according to welfare historian Budgett Meakin, was one of the first companies to set up a welfare department, driven by an Owenite-type belief in the value of an attractive environment to industrial efficiency. In the mid-1890s, following the return of a faulty consignment of cash registers to the plant, the president of the NCR, John H. Patterson decided that poor efficiency was due to dissatisfied workers so, to improve matters, he landscaped the factory and provided incentives for local residents to beautify the neighbourhood and introduced new management systems and a welfare programme.

In outlining his principles for business for his biographer two years before he died, Patterson said: ‘Treat people well and they will treat you well … They (employees) will give you their best if they think you are giving them your best … It pays to do good; it pays to help them [the workers] to help themselves in every moral and physical way.’ The
slogan ‘It Pays’ appeared on signs all around the factory, to reinforce the message.\textsuperscript{80}

After the strike in 1901 in which the welfare programme played a small role (since the officious welfare secretary was sacked), Patterson opened a new labour department that has been called the first modern personnel department in American industry as it handled labour issues such as safety and grievances as well as welfare. By 1915 many large firms had opened such departments, those of US Steel (from 1911) and the Ford Motor Company (from 1914) being two of the best known,\textsuperscript{81} and companies competed in the elaboration of the amenities they offered.

In Britain the professionalisation of welfare arrived during and just after the end of the First World War, which marked a turning point in industrialists’ thinking about the value of management systems. Companies that had already developed professional welfare systems were influential, notably Cadbury. Following more than a decade as managing director of the company (from 1899), during which he took a great personal interest in company welfare, Edward Cadbury published his Experiments in Industrial Organisation (London, 1912) and the book became a highly regarded source on corporate welfare in the early twentieth century. Cadbury explained how the firm’s policies towards the management and welfare of their workers were essential factors in the company’s successes.

It would be wrong to suggest that welfare in factories was the norm between the wars because, on the whole, working conditions were poor in both nations.\textsuperscript{82} However, welfare was extensive across all kinds of industries and was therefore a significant force for change.\textsuperscript{83} Good welfare provision was regarded as part of a modern industrial outlook and by the 1930s many companies were using modern architecture and design not only to enhance their welfare provision but also to promote it. The Boots Company in Nottingham, for example, chose the architect Owen Williams to design a state-of-the art glass and concrete factory building inspired by European modernism. Boots hailed their building, D10, opened in 1933 as ‘a Model and Modern factory’.\textsuperscript{84} To be fully modern, companies needed not only well-designed factory buildings, but also space for recreation and Boots provided all of these. As suggested by The Architects’ Journal of Wednesday 13 January 1932, in a number dedicated to factories, even in a period of economic stress, sports grounds remained one of the pre-requisites for the ‘modern’ factory:

No factory today can be considered up to date unless it is equipped with dining-rooms. Most reasonably large factories require rest rooms, clinics, research laboratories, and libraries as well, while many of the largest provide gymasia, swimming pools, concert halls and sports club grounds and buildings.\textsuperscript{85}
Conclusion

From the early years of the Industrial Revolution, paternalistic employers began to provide vegetable gardens and recreation space for their employees to improve their health and motivation, for recruitment, retention, stability and promotion. By the end of the nineteenth century, factory gardens and recreation grounds had become integral to employee welfare provision at some model factories, but by the 1920s, they signified a modern, healthy and stable industrial community built on mutual trust and respect between employer and employee. Chapter 2 looks in more detail at some of the modern factories developing their gardens and sports grounds in the years before and after the First World War. Gardens and recreation at factories appeared alongside wider reform movements to improve access to green space in urban areas. Recreational amenities that were originally considered to be luxuries, became more common and even expected in industrial life.

Notes

2 Darley, Factory, p. 21.
8 Ibid.
12 Cooke Taylor, W. Notes of a Tour in the Manufacturing Districts of Lancashire 2nd edn (1842) quoted in ibid., p. 63.
13 Price, Modern Factory, p. 69.
14 Ibid., p. 290.
The factory in a garden


Pevsner, History of Building Types, p. 278.

Ibid.


Crawford, Building, p. 16.

Ibid.


Styles, J. Titus Salt and Saltaire (Saltaire, 1990), pp. 10–12.

Holroyd, A. Saltaire and its Founder (Saltaire, 2000).


Morris R. J. 'The Industrial Town', in Waller, English Urban Landscape, p. 197.

Styles, Titus Salt, p. 20.


Pevsner, History of Building Types, p. 280.


Boettiger, Employee Welfare Work, p. 119.


Crawford, Building, p. 25.

Although there were already substantial industrial towns like Pittsburgh, which in the 1830s was described by travellers as dirty and smoky. Pevsner, History of Building Types, p. 281.


Wynn, Progressivism, p. 7.


Buder, S. Pullman: an Experiment, p. 61.

Crawford, Building, p. 37.


Ibid.

Doty, Mrs D. The Town of Pullman. Its Growth with Brief Accounts of its Industries (Pullman, 1893), p. 94.

The factory in a garden

46 Ibid.

47 Crawford, Building, p. 37.


51 Adelman, Touring Pullman, p. 45.

52 Thompson, F. M. L. The Rise of Respectable Society, p. 213.

53 Cadbury, D. Chocolate Wars. From Cadbury to Kraft: 200 Years of Sweet Success and Bitter Rivalry (London, 2010), p. 3.

54 This point is supported by the frequency with which Bournville is mentioned in all the original sources.

55 Plan of Port Sunlight, 1909, PSVT.SV.

56 Lever Bros Ltd. Employees Handbook (Port Sunlight, 1930s?), Bodleian Library, M05.E04191.

57 Lever Brothers. The Story of Port Sunlight (Port Sunlight, 1953).


60 Meakin, Model Factories, pp. 33–4.


63 McKibbin, Classes, p. 111.

64 Ibid., p. 244.

65 An article on women in industry in Industrial Welfare and Personnel Management in April 1930, suggested that ‘the better type of girl’ now preferred factory work to office work following improvements in conditions in factories (pp. 21–2).


67 In Britain, women over 30 were enfranchised in 1918 and in 1928 were awarded the same voting rights as men. Some American states had granted the suffrage to women at the end of the nineteenth century, although this was made nationwide in 1920. Trade union membership increased rapidly during and after the First World War. See Beard, M. A Short History of the American Labor Movement (New York, 1920), p. 151.

68 Stevenson, J. British Society 1914–45 (London, 1984); Thompson, Rise of Respectable Society.


72 John Patterson of the NCR confided to his landscape architect J. C. Olmsted in 1906 that he had instituted the men’s dining hall at the factory ‘largely to keep the men from going to cheap restaurants down town where they had too much socialistic and incendiary talk’. Olmsted memorandum 6 December 1906, LC.MD.OAR, Series B Reel 20.

73 Cochran and Miller, The Age of Enterprise, p. 246.


76 Jones, Limits of Liberty; see also Jeansonne and Luhrsse, ‘A Time of Paradox’, p. 113.


78 Meakin, B. Model Factories, p. 52.


80 Sir Adrian Cadbury remembers his father, Laurence, recalling with amusement these signs and other motivational slogans posted inside and outside at the NCR factory.

81 Between 1912 and 1925 the US Steel Corporation spent over $158 million on its welfare programme to provide playgrounds, schools, clubs, gardens, safety features, accident relief payments and pensions. ‘United States Steel Corporation Welfare Expenditures, Jan 1st 1912–Dec 31st 1925’, Bulletin No. 11, United States Steel Corporation (Dec 1925) in Biggs, The Rational Factory, 66. Henry Ford introduced a minimum wage, a shorter working week, profit sharing and sports facilities, but he used architecture, not distinctive landscaping to distinguish his factories. See Hareven, Family Time, 38.

82 Fitzgerald, British Labour Management, p. 208.

83 Ibid., p. 186.

84 Promotional leaflet, BC A85/7.