CHAPTER 4
PLANNED COMMUNITIES AND PULLMAN

4.A A General History of Planned Communities

Pullman, Illinois is among the most influential planned company towns in the United States, but it was not the first or the last. A *planned community* features a spatial arrangement and other characteristics both physical and social that were calculated and designed in advance for a particular intended outcome. The first planned community in the US was New Haven, Connecticut, whose nine-square layout defined the independent colony starting in 1638. Throughout the nineteenth century, planned communities included utopian communities separated both for practical and philosophical ideals. Currently, the New Urbanism movement has created planned communities whose dense residential units interspersed with grocery stores, schools, and other amenities challenge the unplanned nature of suburban sprawl. The first of these was Seaside, Florida (1981) and examples more recently, like Atlantic Station, Georgia (2005), often reclaim brownfield sites and include conscious efforts at environmental remediation and improvement.

A *company town* is a special kind of planned community specifically designed by an employer to house and provide services for employees. The idea has ancient roots but gained significant followers wherever industrial production spread in the nineteenth and twentieth centuries.[339] Some companies created *model villages* or *model industrial towns* intended to demonstrate the perceived advantages of paternalistic planning for ameliorating the overcrowding and inequality being caused by new industrial systems. Pullman stands out among American company towns as being perhaps the most thoroughly planned and comprehensively integrated with company agendas, both of which contributed to the ultimate downfall of George Pullman's vision and served as cautionary lessons to companies building towns in later years.

The Town of Pullman may be America's most well-known company town, but new scholarship is sorely needed. Stanley Buder's 1967 book *Pullman: An Experiment in Industrial Order and Community Planning* remains the dominant source for most people interpreting the town of Pullman. Scholars Janice Reiff, Susan Hirsch, and Jane Eva Baxter have used important documentary records and archaeology to update Buder's mainstream narrative and produce vital contributions to long-term understandings of this community. But no one has returned to the vast company records in any systematic way since Buder. Now fully catalogued at the Newberry Library (Buder worked with them before being accessioned there), 2000+ linear feet of company records contain incredibly rich documentation about the town. Photographs, drawings, and other kinds of records—not to mention over 1000 pieces of extant architecture—can all offer entrées for revisiting Buder's history with contemporary lenses of interpretation. What follows is a contextualization of the town of Pullman, a preliminary reading of the architectural evidence, and suggestive topics for future interpretation.

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[339] John S Garner, *The Company Town: Architecture and Society in the Early Industrial Age* (New York: Oxford University Press, 1992), 9–10.

4.B European Comparative Examples before Pullman

4.B.1 Precedent and Philosophy in English Textile Towns

The Industrial Revolution spread throughout England, Europe, and its colonies beginning in the latter half of the eighteenth century. The ideal of a *planned* model village centered around an industrial concern, as compared to many factory towns that grew organically (though some we might say metastasized) around an industrial core of one or a group of factories. The first planned model village dates back to 1785 when the Scottish industrialist David Dale, the textile machinery inventor Richard Arkwright, and Dale's son-in-law and utopian socialist reformer Robert Owen, partnered to build the model industrial town of New Lanark (1785), south of Glasgow (now a UNESCO World Heritage Site, 429 Rev). Surrounding the cotton mills, which grew to be among the largest in the world, this company built housing, schools, and commercial buildings with the explicit intent of limiting illness, crime, and the misery of industrial work. This paternalist environment influenced model villages around the world including Pullman.

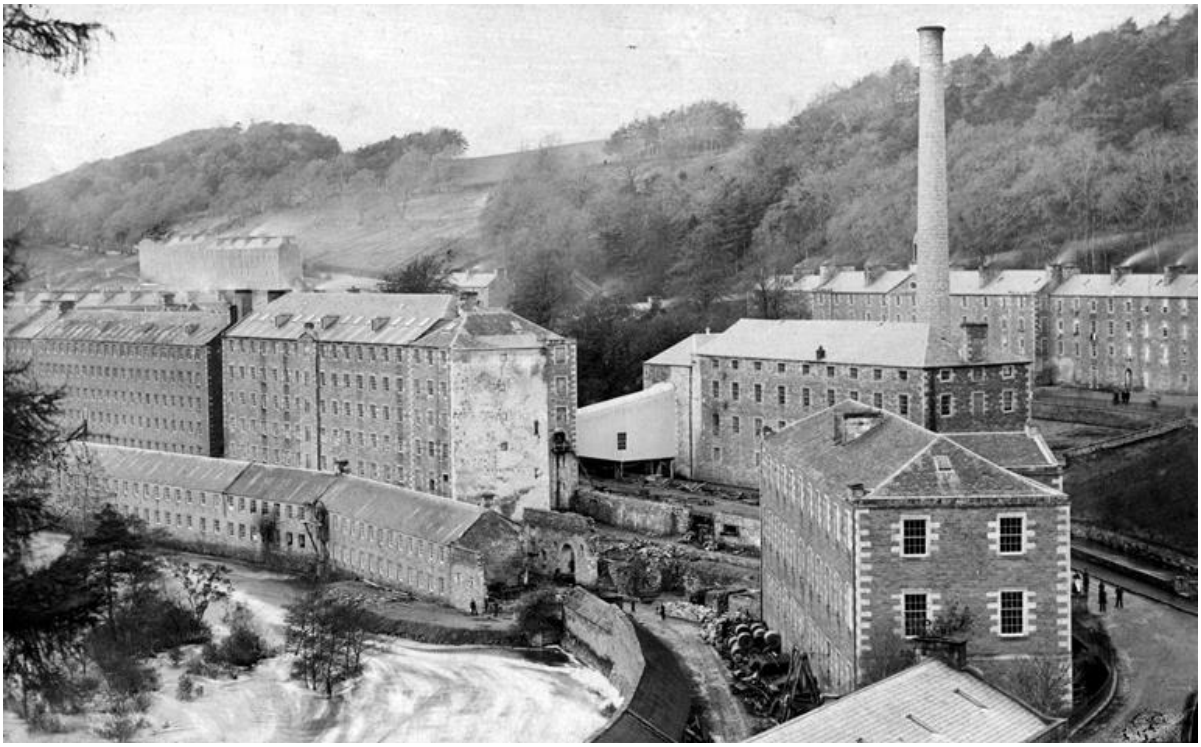

Figure 4.1. New Lanark, Scotland, founded in 1785 to create a model village for workers in large industrial cotton mills. Photo: New Lanark Trust, https://www.newlanark.org/world-heritage-site/new-lanark-trust.shtml.

When Owen became New Lanark's mills manager in 1800, he instituted a number of social and welfare programs, such as schools, libraries, and mutual aid societies, for the approximately 2,500 workers. The firm's partners thought these amenities too expensive, though the mills were overall commercially profitable, and after an ensuing showdown over what level of investment in the workers was appropriate, the reformers under Owen (including the economist Jeremy Bentham, who had joined the

Board of Governors) succeeded in buying the mill/town.[340] The experiments continued for more than a decade, to mixed success. On one hand the paternalistic endeavors did provide above-par worker housing and amenities, though often at higher rents than would have been available in nearby towns (assuming such housing was available or viably close), but on the other hand it came at the cost of social control of the community by the factory owners. Such control, though at least rhetorically benevolent, could be benign or draconian, but it was control, nonetheless. Capitalists saw this worker housing first and foremost as a profit center – sometimes returning up to 13% annual return when most capitalists were happy with 5–6%[341] – even if they may have been sincere in working for the social and moral uplift of their workers. New Lanark is an excellent example of the struggle between labor and capital, as well as between the managers and the Board of the partnership. It is also an early, telling example that in order to affect a totally socializing vision, owners needed to maintain or consolidate control over the planned community. This is why many such endeavors seem to work for a time, but then some other faction, be it labor, investors, or government, intervene and the grand social experiments inevitably fray.

The idea of model industrial villages, "a distinct concept [representing] a pragmatic application of utopian (or arcadian) ideals to an industrial context,"[342] grew somewhat slowly in the later eighteenth and early nineteenth century but by the early years of that century, working and especially living conditions in a great number of English cities had become appalling for the working classes. Benjamin Disraeli (1804–1881), the noted UK politician and eventually prime minister (1874–1880), rose to prominence in leading the charge to rectify this situation. In his fictional, yet transparently pointed novel, *Sybil, or The Two Nations* (1845) he laid out the idea of a model industrial village, which could solve much of the plight of the working classes, even if the description still suffers from condescending and heavy-handed paternalism of the English class system.

Disraeli describes the "proportionately wide" streets of the town of Mowbray with "broad pavements and … blazing gas-lights [that] indicated its modern order and prosperity." The factories and warehouses rose on either side, "not as beautiful as the palaces of Venice, but in their way not less remarkable," while "here and there, though rarely, [one saw] some ancient factory built among the fields in the infancy of Mowbray by some mill-owner not sufficiently prophetic of the future, or sufficiently confident in the energy and enterprise of his fellow-citizens, to foresee that the scene of his labours would be the future eye-sore of a flourishing posterity."[343] This he contrasts to the squalor of Wodgate, where its

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[340] Ian Donnachie and George Hewitt, *Historic New Lanark: The Dale and Owen Industrial Community since 1785* (Edinburgh University Press, 1993); Ophèlie Simèon, *Robert Owen's Experiment at New Lanark: From Paternalism to Socialism*, Palgrave Studies in Utopianism (Cham, Switzerland: Palgrave Macmillan, 2017). Terri Martin Wright, "A Community in a Garden: The Pullman Paradigm in Southern Illinois," *Journal of the Illinois State Historical Society* 91, no. 3 (1998).

[341] Jack Reynolds, *The Great Paternalist: Titus Salt and the Growth of 19th-Century Bradford* (London: Temple Smith, 1983), 257.

[342] Howard Eaglestone et al., *Two Airedale Landscapes: St. Ives & Saltaire (Landscapes Designed During the Industrial Revolution)*, New Arcadian Journal 25 (Leeds: New Arcadian Press, 1987-88), 9.

[343] Benjamin Disraeli, *Sybil: Or, the Two Nations*, Nelson Classics (London: T. Nelson, 1957), 107–8.

"population by swarming thousands, [are] lodged in the most miserable tenements in the most hideous burgh in the ugliest country in the world."[344]

Disraeli's novel appeared in the same year that Friedrich Engels also blasted the industrial order in his *The Condition of the Working Class in England* and both followed a number of reform movements in the 1830s and 40s: the *Report of the Select Committee on Factory Children's Labour* (often known as the Sadler Report after Michael Sadler, the chairman of the parliamentary committee) on the abysmal conditions and child labor of the textile mills in England was released in 1831–32;[345] in 1838, a group of Parliamentary reformers proposed "The People's Charter," kicking off a decades-long struggle known as "Chartism," where petitions to Parliament, signed by millions of workers, argued for universal male suffrage (although the movement was not a success, it did lead to two major general strikes in 1842 and 1848, so employers had to pay attention); and the formation from 1844 onwards of nearly two dozen societies devoted to the betterment of worker housing and labor conditions (which generally agitated towards labor unrest if conditions did not improve). These developments led owners, who saw themselves as the ones who should determine any social changes that were to be had, to provide, here and there, a number of small-scale worker accommodations like better housing, schools, or perhaps a social club and sports league. But they also led to larger-scale urban-industrial planning experiments, often labeled "utopian" or "utopian socialist," that tried to get control of the social forces in the population of industrial workers in such a way that industrial production could be sustained along with the social welfare of the workers—or in the parlance of the factory owners of the day, in order to improve "the moral, social and intellectual character of the working classes."[346]

4.B.2 English Model Town Planning

Various industrialists took what they perceived to be the "worker problem" to heart and specifically paid attention to Disraeli's ideas. Edward Akyroyd enacted the first such scheme at Copley (1847) near Halifax in Yorkshire, though it did not open until 1853 and never fully flourished.

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[344] Ibid., 199–200.

[345] P. Gaskell, *The Manufacturing Population of England, Its Moral, Social, and Physical Conditions, and the Changes Which Have Arisen from the Use of Steam Machinery; with an Examination of Infant Labour* (London: Baldwin and Cradock, 1833).

[346] Reynolds, *The Great Paternalist: Titus Salt and the Growth of 19th-Century Bradford*, 256. More formal architectural suggestions came later, as for example with Charles Henry Hartshorne, *The System of Building Labourers' Cottages: Pursued on the Estates of His Grace the Duke of Bedford, Practically Examined* (Northampton: J. Butterfield, 1849); Henry Roberts, *The Dwellings of the Labouring Classes, Their Arrangement and Construction* (London: SICL, 1855). and subsequent works buy Roberts; or the very influential book by James Hole, *The Homes of the Working Classes with Suggestions for Their Improvement* (London: Longmans, Green and Co., 1866). By the time Pullman was designing his town, such suggestions were easily ready to hand, for example, in Alfred Tredway White, *Improved Dwellings for the Laboring Classes* (New York: G.P. Putnam's Sons, 1879). We do not know, however, what (or whether) Pullman or Beman read on the subject.

In that same year, Titus Salt (1803–1876) opened Saltaire (1853), which became a successful model industrial village.[347] Salt was a leading industrialist in the Yorkshire town of Bradford, which in the first half of the nineteenth century had, along with neighboring Leeds, exploded from a rural market town into a high-density textile manufacturing town. Fortunes were made and conditions declined; Salt saw an opportunity to make a fresh start with a state-of-the-art new factory on the River Aire (for transport, not water power, as steam had become the mainstay of large factories in the coal-rich region overlapped by the canal system), a mere 3½ miles northwest of the city. He conceived of Saltaire in 1850 and it opened three years later.

Model industrial towns like Saltaire, first and foremost, were developed in order to avoid the problems associated with high density urban living and sought to provide a replacement for traditional (if idealized) village life, particularly by trying to replicate a replacement for the extended family and the social stability of community that came with it. By design however, model industrial towns did not see this sort of relationship grow organically; rather, it was imposed from above in terms of the organization of the living and working space and to a degree, the social relationships—and "orderly and disciplined life" was Salt's belief—between workers (but never, of course, between workers and owners). Salt planned to build a town with a population of approximately 10,000, and laid out his gridded town with all the civic amenities of a proper village: town hall, church (notably Congregational, not Church of England, though the Wesleyan Methodists were offered a lot for a chapel in 1866), a market and shops, a green, schools, and eventually almshouses, as well as some slightly reformed amenities such as wash-houses for clothes and bath-houses for the residents, a central dining hall, music room, literary society and institute, and a speaker series. Notably, there were no pubs, for although Saltaire was not strictly speaking dry, Salt approved of the temperance movement in general. He also, however, made sure that Saltaire would not be subject to control by the greater Bradford/Shipley municipal region, remaining under his control alone. Finally, in 1869, Salt built an impressive institute—an evolution of the small Mechanics' Institutes that were common in most industrial towns by then[348]—which had a "reading room, library, chess and draughts room, smoking room, billiard room with four tables, bagatelle room with three tables [the billiards game with pegs as obstacles]," two lecture halls, two art rooms, a number of classrooms, a gymnasium and rifle drill room, and a School of Art and a School of Science. He finished the whole endeavor with a landscaped park across the river with tended walkways and

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[347] The following is derived from Abraham Holroyd, *Saltaire, and Its Founder, Sir Titus Salt, Bart.* (Bradford: T. Brear, F. Hammond, Abraham Holroyd, and Thomas Harrison, 1873); *The Great Paternalist: Titus Salt and the Growth of 19th-Century Bradford*; ibid., 256–82; Eaglestone et al., *Two Airedale Landscapes: St. Ives & Saltaire (Landscapes Designed During the Industrial Revolution)*; Stuart Rawnsley, "Saltaire: From Old Paternalism to Romantic Capitalism," *New Arcadian Journal* 25 (1987-88); John Styles, *Titus Salt and Saltaire: Industry and Virtue* (Shipley: Salts Estates Ltd., 1994); David James, "Salt, Sir Titus, First Baronet (1803–1876)," in *Oxford Dictionary of National Biography* (Oxford: Oxford University Press, 2004).

[348] This movement has generally been studied in local contexts of individual Mechanics' Institutes, but see Martyn Walker, *The Development of the Mechanics' Institute Movement in Britain and Beyond Supporting Further Educations for the Adult Working Class*, Research in Education (London and New York: Routledge, Taylor & Francis Group, 2017).

flowerbeds, and areas for boating, swimming, lawn bowling, croquet, archery and cricket. The park however was not an area for free-for-all play. No dogs or unaccompanied children under eight were allowed, and smoking, drinking, swearing, and religious or political demonstrations were completely prohibited.

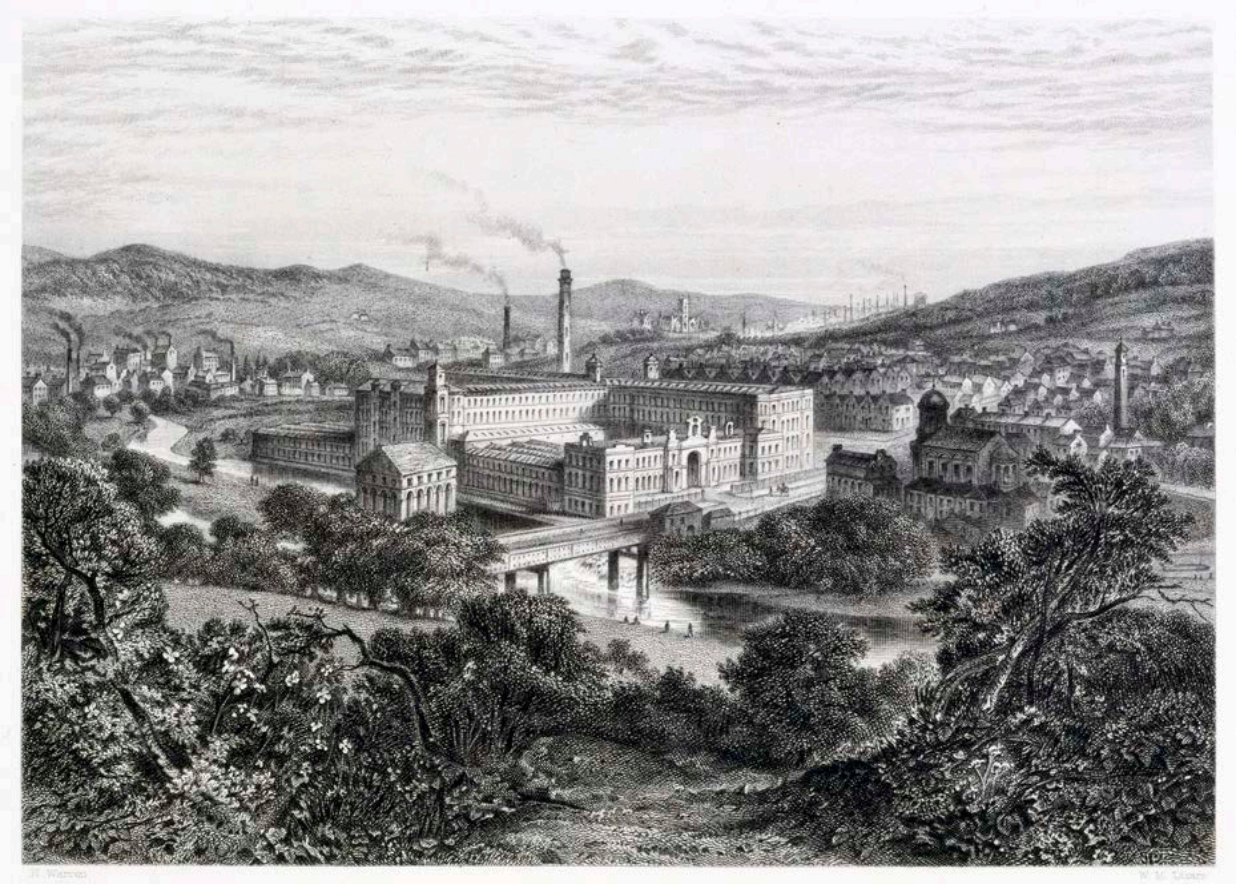

Figure 4.2. William Lizars, H. Warren, "Saltaire," London, 1869. Science Museum of London, O'Flynn Antiquarian Books, 1983-1329/2.

Notably, one element Salt and other model town developers paid attention to that was not available to Pullman in the flat land around Chicago, was setting the new town within a picturesque, and ostensibly uplifting, landscape. Salt built his town with three types of housing, all with running water, gas, and a privy in each backyard (twice the sanitation as required by code of the time): boarding houses, "overlookers" houses for mid-level housing for his foremen, and detached two-bedroom cottages for married workmen. Eventually the plan also included two dozen large, well-appointed single-family houses for senior executives and professionals in the town. Although naturally Salt expected to receive a return on his investment on these properties, rents were actually relatively modest by the standards of

the day.[349] The construction of Saltaire took over 15 years to complete, whereas Pullman was substantially complete in about four.

In the end there was a great deal of boosterism and praise for the project at Saltaire, and overall the Victorians (or at least the upper classes for whom much of the press was favorable) saw the town as a great success. By the 1880s, things like worker associations or profit-sharing, and other forms of housing such as the novel concept of the apartment, also began to turn social critics' attention towards other models of social relationships between labor and capital. Some critics saw the town as a sort of flytrap: "Salt [had] trapped a labour force at Saltaire by the promise of good wages and excellent conditions and having achieved the objective was now beginning to pull wages down;" a later evaluation of the experiment in 1923 was mixed (though also a reflection of changing norms):

> [Saltaire] is an example of the kind of philanthropy, which reflects credit on the promoter, but provides very little real happiness to the recipient. For at best it can only be said that it is a thirty to the acre congested scheme of terrace houses, surrounded by a park and an extravagance of public buildings.[350]

Similar debates and experiments in using the built environment and town planning to ameliorate relationships between workers and employers occurred throughout Europe and its colonies. For instance, manufacturing enterprises in the Rhine Valley sparked experiments in worker housing that later influenced American developments. In the old textile town of Mulhouse, for instance, large eighteenth-century housing units intended for multiple unrelated families sparked criticism in the 1830-40s over health and standards of propriety. In response, the Dollfus Company commissioned smaller units for one to four families partly underwritten by the French government that were then sold to working families. The belief that more individualized housing units (and sometimes homeownership) encouraged workers to take responsibility for maintaining their houses as well as their own healthy wholesome lifestyles grew from the building campaigns inspired by Mulhouse.[351] The extractive industries of mining and lumbering in Scandinavia inspired early model towns in the eighteenth century that continued to evolve and influence policy-makers into the nineteenth century.[352]

4.B.3 French Model Town Planning

In France, as early as the 1830s, industrialists were also exploring what made successful factory working and living arrangements. The most notable in terms of attention being paid in the Anglo world, was Charles Fourier's idea of the *phalanstère*, Jean-Baptiste Godin's realization of that idea(l) near Guise.

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[349] This may be a function of demand, for Saltaire is expanding the needed workers, while nearby Bradford was overcapacity and had a housing shortage, but at least Salt was not overcharging from the start.

[350] Reynolds, *The Great Paternalist: Titus Salt and the Growth of 19th-Century Bradford*, 284. It is not entirely clear whether this was happening at Saltaire, or if so, was not a reflection of wages general.

[351] Garner, *The Company Town*, 43–73.

[352] Garner, 75–91.

Proselytization for such ideas was occurring in New York in the 1870s, just when Pullman began contemplating his new town.

Charles Fourier (1772–1837) had proposed in the early nineteenth century that the most harmonious form of a factory and its workers was a self-contained, communal utopian community in a single building that he called a phalanstère (a monastery for a *phalanx*, or military fighting unit in ancient Greece). The idea was notable because it contained not only the workshops and living quarters for the workers, but also communal dining spaces, social halls, and recreational and educational amenities like music rooms and libraries. Jean-Baptiste Godin (1817–1888) created a foundry complex within the town of Guise (1848-52), northeast of Paris near the Belgian border, where he tried to actualize Fourier's ideas. There he built *Le Familistère de Guise* (shifting from the "phalangeal monastery" to the "familial monastery"), a centralized living and working utopian cooperative community.[353] He built a cast iron foundry, three four-story apartment blocks with two to three room workers' apartments, and a self-contained shopping building with a number of shops, a café, restaurant, and casino. This was not quite the arcade model Pullman would later use, though the Familistère's apartment blocks did have glass-roofed central courtyards where residents could socialize or have fêtes and the children could play in all weather. Notably, Godin's vision was multi-generational, and he consciously included the education of children from nursery to two-tiered pre-school to school to work, and the teachers themselves were chosen from among the inhabitants (Howland, see below, seemed most energized by his theories here). There was no explicit accommodation for retirement and the whole scheme seems to rely on a pre-modern, zero-mobility model of workers being tied to one industry for life, and for generations. Still, about a thousand residents lived and worked there for over four decades and in 1880, Godin converted it to a fully worker owned-and-operated cooperative society that ran the foundry and housing until after WWII.

Although he was developing the Familistère throughout the 1850s and 60s, Godin's ideas appeared in English and were widely disseminated after 1881 and thus would more likely have influenced the operation, if not design, of Pullman city.[354] That said, throughout the 1870s Maria and Edward Howland

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[353] Literature on this community is extensive in French, but see Theresa M. McBride, "Socialism and Domesticity: The "Familistère" at Guise," *International Labor and Working-Class History*, no. 19 (1981); Erik de Gier, *Capitalist Workingman's Paradises Revisited. Corporate Welfare Work in Great Britain, the USA, Germany and France in the Golden Age of Capitalism, 1880-1930* (Amsterdam: Amsterdam University Press, 2016), 132-44. Importantly for potential contemporaneous connections, see Edward Howland, "The Social Palace at Guise," *Harper's New Monthly Magazine* 44, no. 263 (1872). This was also reprinted as *The Palace of Industry, or the Workingmen's Home: Capital and Labor in Harmony. An Account of the Experiment at Guise, France* (New York: Samuel Leavitt, 1874). Howland's points seem to parallel much of Pullman's thinking (other than the co-operative ownership, of course). The complex is now a museum; see https://www.familistere.com/fr.

[354] Jean Baptiste André Godin and Edward Vansittart Neale, trans., *The Association of the Familistére, at Guise (L'aisne), France. A Lecture ... Delivered September 8th, 1881* (Manchester: Central Co-operative Board, 1881); Woman's Social Science Society of New York, *The Association of Capital with Labor: Being the Laws and Regulations of Mutual Assurance Regulating the Social Palace, at Guise, France* (New York: Evening Post, 1881). Godin's own writings appeared as *Solutions sociales* (Paris: A

promoted Godin's ideas, coupled with a socialist (now more Marxist) interpretation of industry and labor.[355] Maria Stevens (1836–1921) had been a Lowell mill girl and, like many, ended up becoming a school teacher and eventually principal once she left the factory in the mid-1850s.[356] Teaching in Five Points on Manhattan in New York, she gravitated to Stephen Pearl Andrew's urban anarchist commune and became close friends with noted "father of Fourierstic socialism" in America, Albert Brisbaine.[357] "Somewhere between the mill, the slum, and the commune, Howland became an ardent feminist and cooperative-minded socialist."[358] Howland, now married to her second husband, Edward Howland (a Harvard man, as was her first husband, Lyman W. Case), took the ideas and ran with them, pitching such communes in Philadelphia (largely rejected), assisting the design of another in Topolobampo, Mexico (which did moderately well), and publishing novels promoting the ideas.[359] The Howlands were circulating in east coast society just as Pullman was forming his ideas of the manufacturing city that would bear his name, though their shift to more strident Internationalism by the later 1870s would likely have alienated them directly from Pullman. For example, they helped found the Sovereigns of Industry, an anti-monopolist collective for industrial workers that paralleled the agrarian grange movement. Still, many of the greater ideas of Godin, and the Howlands' rendering of the Familistère as the "Social Palace" in English, do seem to parallel the logic of Pullman city, but interpreted under Pullman's capitalist-as-great-man philosophy. It is also interesting to note that Godin began his reforms right after the 1848 revolutions in France disrupted their social order, and it seems that Pullman had the similar reforming spirit shocked into him by the disorder of the 1878 Great Railway Strike.

Le Chevalier, Guillaumin & Co., 1871) and in translated into English by Marie Howland, then appeared as Jean-Baptiste André Godin, Marie Howland, and Edward Howland, *Social Solutions* (New York: J.W. Lovell Company, 1886).

[355] It is notable that the very next issue of *Harper's* after the one with Howlands' description of La Familistère carried George M. Towle, "Saltaire and Its Founder," *Harper's New Monthly Magazine* 44, no. 264 (1872). The ideas circulated widely and drew intense public's attention.

[356] Paul M. Gaston, *Women of Fair Hope* (Montgomery, AL: NewSouth Books, 1012).

[357] Brisbaine was quite successful at promoting pre-Marxist socialist ideas in the U.S. in the 1840s and 50s, and helped found a number of Fourierist *phalanestère* in America. For general reference, see Carl Guarneri, *The Utopian Alternative: Fourierism in Nineteenth-Century America* (Ithaca: Cornell University Press, 1991).

[358] Timothy Messer-Kruse, "The Yankee International: Marxism and the American Reform Tradition, 1848-1876," (1998): 236-40.

[359] Charles W. Moore, "Paradise at Topolobampo," *The Journal of Arizona History* 16, no. 1 (1975); Dolores Hayden, "Two Utopian Feminists and Their Campaigns for Kitchenless Houses," *Signs* 4, no. 2 (1978).

4.C Comparative Examples in the United States before Pullman

4.C.1 Democracy and Manufacturing

In the new United States, the role of manufacturing specifically and capitalism at large in shaping American life created intense debate almost as soon as the Constitution was ratified. A famous debate ensued between Thomas Jefferson and Alexander Hamilton, both members of George Washington's cabinet, about the degree to which the new United States should follow England toward manufacturing. Jefferson believed that land ownership and farming created and sustained democratic principles and attitudes. His vision of an "Agrarian Democracy" made up of small-scale yeoman farmers, he argued, would keep the US from developing large manufacturing cities, which many saw as centers of vice, drunkenness, sickness, and – worst of all – a taste for luxury and greed. Jefferson's argument appeared in the "Manufactures" section of his *Notes on the State of Virginia*, written in 1781 while in Paris (which he regarded as a quintessentially problematic city) and published in London and the United States in 1787.[360]

Secretary of the Treasury Alexander Hamilton promoted a counter-vision that used good planning to mitigate the harmful effects of industrial production. Hamilton and like-minded colleagues believed that manufacturing had to be the way forward to establish a US economy and favorable basis of trade. Benjamin Rush of Philadelphia argued that manufactures would not necessarily alter America's agricultural basis but rather free it from the tyranny of British tariffs and tax system. Tench Coxe, Assistant Secretary of the Treasury, was among those encouraging Hamilton to set up a "national manufactory," which Hamilton argued for in his *Report on Manufactures* presented to Congress in 1791.[361]

Hamilton and a group of investors established a model town at the great falls of the Passaic River called Paterson, New Jersey (1792). The Society for the Establishment of Useful Manufactures (SUM) was a public-private partnership that gave Paterson a ten-year reprieve from state taxes to grow into a textile manufacturing center. They hired Frenchman Pierre L'Enfant, who was also designing the new capital city in Washington, DC, to plan Paterson's layout and brought in English mechanics to set up mill machinery. Despite this well-planned scheme, the 1792 bank failures disrupted funding leading to widespread dissatisfaction and collapse. While Paterson did eventually grow into a wool and then silk manufacturing center, these early plans did not come to fruition for several decades.

Critics painted Paterson's initial failure as an indication that manufacturing unfairly wasted government funds, favored wealthy investors, and undermined the rights of individual farmers and manufacturers. However, the debate lost steam in the early nineteenth century when manufacturers began to dominate

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[360] Margaret Crawford, *Building the Workingman's Paradise: The Design of American Company Towns* (London and New York: Verso, 1995), 11-15; Hardy Green, *The Company Town: The Industrial Edens and Satanic Mills That Shaped the American Economy* (New York, NY: Basic Books, 2012), 11-13.

[361] Crawford, *Building the Workingman's Paradise: The Design of American Company Towns*, 13-15; Green, *The Company Town: The Industrial Edens and Satanic Mills That Shaped the American Economy*, 11-13.

economic activity. Paterson's model town and its English precedents eventually influenced nineteenth-century American industrial development.

4.C.2 Industrial Model Towns

Robert Owen sold out his interest in New Lanark to move to the US to found New Harmony, Indiana (1825) in the southwestern tip of Indiana, where he tried to develop his ideas for social, intellectual, scientific, physical development of the town that would allay the problems vexing industrial communities everywhere (including by that time New Lanark). Although the physical fabric of New Harmony had already largely been built by an earlier religious utopian community, Owen recruited educational and scientific reformers to remodel the social and behavioral components of the town to prove his theories of Owenism correct. The concern was a financial failure within two years and Owen departed by 1829. The scheme had attracted a fair number of frontier opportunists that worked against success, and residents—even the committed ones who had signed up and moved from the East to be part of the experiment—found living in this new "mode of life" chafing and ultimately unworkable. Still, numerous social and educational reforms were incubated at New Harmony, including cooperative ownership schemes, co- educational public schools and industrial schools (including new educational philosophies based on Pestalozzian theories),[362] and mutual self-betterment institutions (which fed the Mechanics' Institutes movement in mid-century and later the idea that towns should have public amenities like libraries and parks). On the other hand, the heavy-handed rationalist control from the top, even in this case though a committee acting on supposedly higher principles rather than one authoritarian paternalist, chafed the residents, as did some of the precepts such as communal property requirements and Owen's insistence on an established town religion (Scottish Presbyterianism; also incidentally running afoul of the US Constitution's First Amendment).

[362] Johann Heinrich Pestalozzi (1746–1827) was a Swiss Romantic educational reformer who instituted the idea that education should be tailored to children and encompass relevance to four "spheres": the familial, the vocational, the "national" (*i.e.*, for the state), and that of the "inner sense" (a wholistic idea of personal, moral, and religious fulfillment). Gerald Lee Gutek, *Pestalozzi & Education* (New York: Random House, 1968); J.O. Smith, "Pestalozzian Principles," *The Journal of Education* 38, no. 9 (no. 934) (1893).

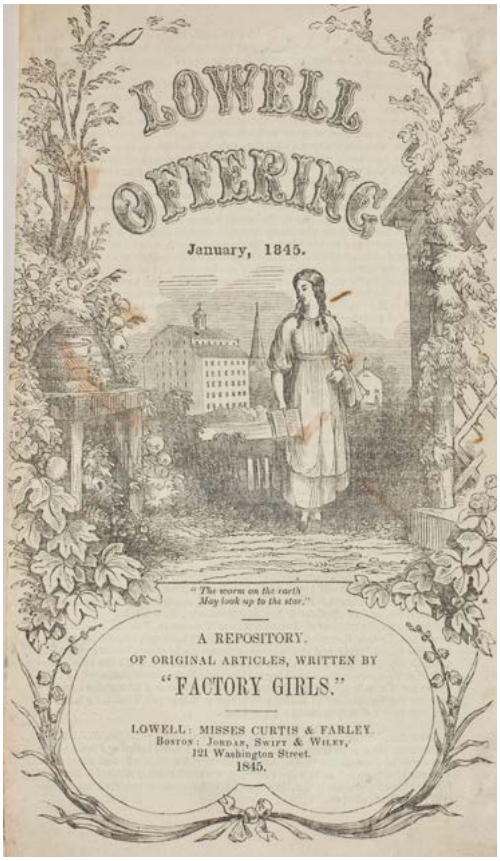

Figure 4.3. "The Lowell Offering," (Lowell: Misses Curtis & Farley; Boston: Jordan, Swift, & Wiley, January 1845).

Most celebrated of American factory towns is Lowell, MA (1826), where the industrialist William Cabot Lowell moved his Waltham textile manufacturing plant when it outgrew its old space and waterpower resources. The Boston Manufacturing Company was a well-funded version of the already-established Rhode Island System of manufacture, which had been propelling thousands of small textile mills throughout New England since the 1790s. Whereas these small mill towns, such as Pawtucket, RI, Whitneyville, CT, and Rockdale, PA featured small cottages rented by families who all fulfilled needs in the factories (including children), Lowell instituted boardinghouses for female employees. His company's more mechanized looms required more knowledge than children could provide but did not need the strength of men. They could be operated by women, who could be paid less than men, making the family model of employment old fashioned. This new so-called Waltham System made famous the Lowell mill girls. They came from farms to supplement their family incomes and save money for a favorable marriage. Some reformers hoped the women would return to their communities after stints in the mills, thus avoiding a proletarian underclass. Many women, however, remained at the mills and helped to create growing industrial cities. The boardinghouses operated as *in loco parentis* with female housekeepers enforcing strict rules required by the mill companies. These rules, including mandated bedtimes, church attendance, and overall "propriety," reassured families that the moral well-being of their daughters would be looked after. Mill officers promoted projects such as the *Lowell Offering*

magazine filled with essays written by female employees who somehow found time to pen stories and poems after their shifts.[363]

Lowell, however, was not a true company town because although it was developed as an industrial center with elements of social control and social betterment at the core of Lowell's philosophy, these experiments took place primarily within the factory. Only some of the boarding houses were directly owned by Lowell.[364] The town itself was not largely a planned concern beyond the industrial core, itself conditioned by the terrain of the Merrimack River. The waterpower system, for example, was a consortium of independent firms managed by the Lowell Associates, whose main concern was rents and the allotment of water to each firm.[365] The rest of the town, its civic infrastructure, residential areas, amenities, and regulations, were much like any New England village, albeit one with a fairly heavy-handed central paternalistic mono-industry guiding its development. Planning historian Margaret Crawford has called Lowell a "corporation city."[366]

4.C.3 Paternalism

As industrialization accelerated in the 1840s and in earnest after the Civil War, American companies found themselves more frequently confronted with the need to house and provide for workers. The notorious "closed" towns of the Pennsylvania coal mining region and elsewhere emerged at this time and states as well as the public in general recognized problems with such total control. Companies embraced what Crawford calls the "New Paternalism," finding ways to balance appealing housing and services with profitability and a better public image.

This new paternalism appeared in New England and Middle Atlantic towns, and also along the resource frontier at a distance from population centers. In the mining regions of Lake Superior, for instance, where companies began to profit in the 1850s, companies had no choice but to build housing for their

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[363] Gwendolyn Wright, *Building the Dream: A Social History of Housing in America* (Cambridge, MA: MIT Press, 1983); Crawford, *Building the Workingman's Paradise: The Design of American Company Towns*, 11-15; Green, *The Company Town: The Industrial Edens and Satanic Mills That Shaped the American Economy*, 8, 113-14.

[364] While Lowell is a well-known story, the literature on it is surprisingly thin: Laurence F. Gross, *The Course of Industrial Decline: The Boott Cotton Mills of Lowell, Massachusetts, 1835-1955*, Johns Hopkins Studies in the History of Technology (Baltimore: Johns Hopkins University Press, 1993); Mary Carolyn Beaudry and Stephen A. Mrozowski, *Interdisciplinary Investigations of the Boott Mills, Lowell, Massachusetts*, 3 vols., Cultural Resources Management Study (Boston, MA: Division of Cultural Resources, North Atlantic Regional Office, National Park Service, 1987-89); Stephen A. Mrozowski, Grace H. Ziesing, and Mary Carolyn Beaudry, "Living on the Boott: Historical Archaeology at the Boott Mills Boardinghouses, Lowell, Massachusetts," (1996); Benita Eisler, *The Lowell Offering: Writings by New England Mill Women (1840-1845)* (New York: Norton, 1998).

[365] Patrick M. Malone, *Waterpower in Lowell: Engineering and Industry in Nineteenth-Century America* (Baltimore: Johns Hopkins University Press, 2009).

[366] Crawford, *Building the Workingman's Paradise: The Design of American Company Towns*, 23.

employees who had no other housing options. The country's first profitable copper mine, The Cliff Mine in Keweenaw County, Michigan, built workers' houses first of log and then larger frame structures. They often started with a boardinghouse but moved as quickly as possible to single-family houses to attract families and a stable workforce. Quite early in this region's development, companies decided not to run "closed" company towns that prohibited workers from buying housing or goods from non-company sources. Instead, these companies encouraged entrepreneurial merchants to run the retail operations of their burgeoning region and sold them mineral-poor land to set up a commercial town. This kept the companies from bearing the burdens, both financial and social, of paying employees and also meeting their needs as consumers.[367]

Copper Country companies, however, did build significant workers' housing. Companies in the Copper Country, including the Quincy Mining Company and the Calumet & Hecla Mining Company, starting in the 1880s and continuing into the 1920s, built single-family houses and rented them to employees based on a fixed price per room. They usually built houses near each mine shaft or "mining location" and each location captain or "boss" allocated housing to the employees he most valued. Companies often named each group of houses after traditions of the various ethnic groups constituting their workforce. Swedetown, Frenchtown, Limerick, and Hardscrabble (a common moniker in Cornish mining regions), all appeared on the landscape. Studies have shown, however, that employees moved frequently to better their situation and rarely lived in the ethnic segregation suggested by the location names.[368]

Companies in this region, did however, use housing as a tool in their strategies of social control. The underground mining hierarchy was manifested above ground in the arrangement and quality of housing. The managers rented the largest most convenient houses situated in line with the mine shafts and pay offices. Among the workers, those with the best jobs and from the most favored ethnic group got the best houses, again the most convenient and newest. The same kind of physical manifestation of social hierarchy that drove the design of Pullman was being established in the Copper Country in the 1880s.[369]

4.C.4 Industrial Suburbs

In addition to the success of paternalistic town planning by companies like those on Lake Superior, George Pullman also probably saw the results of unplanned industrial expansion. What researchers today call industrial suburbs were appearing on the outskirts of growing cities including Chicago. People running and expanding industrial factories increasingly needed more space and found opportunities at the perimeter of town where land cost less and taxes were lower. Logically, workers followed them. As

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[367] Don H Clarke, *The Cliff Mine*, Copper Mines of Keweenaw (Ann Arbor, MI: University of Michigan, 1976).

[368] Alison K. Hoagland, *Mine Towns: Buildings for Workers in Michigan's Copper Country* (Minneapolis, MN: University of Minnesota Press, 2010); Larry D. Lankton, *Cradle to Grave: Life, Work, and Death at the Lake Superior Copper Mines* (New York, NY: Oxford University Press, 1991).

[369] Hoagland, *Mine Towns: Buildings for Workers in Michigan's Copper Country*; Lankton, *Cradle to Grave: Life, Work, and Death at the Lake Superior Copper Mines*; *Hollowed Ground: Copper Mining and Community Building on Lake Superior, 1840s-1990s*, Great Lakes Books (Detroit, MI: Wayne State University Press, 2010).

long as the population center remained close enough, companies did not need to build whole towns as on the resource frontier. In these industrial suburbs, housing appeared haphazardly built to accommodate new-comers and then often rebuilt and improved as more and more people stayed. These "Unplanned Suburbs" as geographer Richard Harris has termed them, were not suburbs built by developers for the middle class following street cars and commuter rail lines. Rather they were organic communities built out of necessity that often created social conflict and problems for municipalities dealing with sewer and drinking water delivery.[370]

Pullman would have seen industrial suburbs like these arise in Chicago. The town of Lake, for instance, arose in the 1870s around meat packing and other industries that valued space away from the population center but also could not be too far from the financial networks and access to market that Chicago afforded. Working-class Chicagoans left the city to follow the jobs to Lake in the decade before Pullman established his town so he would have known labor would leave the city.[371] Geographer Robert Lewis suggests that Pullman was among the pioneers creating the industrial suburbs that built up the Calumet region, but that his choice to control the design set him apart.[372]

4.C.5 Planned Philosophical and Religious Utopias

It bears remembering that while these places battled the problems of industrial capitalism with model town design, other Americans planned communities to establish alternative relationships with the mainstream marketplace of goods and ideas. With the United States itself being somewhat of a utopian experiment, the nineteenth century became a hotbed of activity for planned communities with experimental religious or philosophical ideals, all of which could have been familiar to George Pullman and his designers.

Some utopian communities, for instance, embraced ideas of communal property to counteract inequality and hierarchy. First among these were the Shakers, founded in England and reorganized in the new United States following the Revolutionary War in the 1780s. They jointly owned their towns, products, and profits, and believed that making things by hand constituted a spiritual act of devotion. They embraced equality between the sexes, which allowed for female leadership. Likewise, celibacy removed both the legal inequality of marriage and related property rights, and the perceived moral distraction of sexual intercourse. They used architecture to keep men and women separate and to

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[370] Richard Harris, *Unplanned Suburbs: Toronto's American Tragedy, 1900 to 1950* (Baltimore: Johns Hopkins University Press, 1996); Robert D. Lewis, *Manufacturing Suburbs: Building Work and Home on the Metropolitan Fringe* (Philadelphia, PA: Temple University Press, 2004).

[371] Elaine Lweinnek, *The Working Man's Reward: Chicago's Early Suburbs and the Roots of American Sprawl* (New York, NY: Oxford University Press, 2014), 2014.

[372] Robert D. Lewis, *Chicago Made: Factory Networks in the Industrial Metropolis* (Chicago: University of Chicago Press, 2008); *Manufacturing Suburbs: Building Work and Home on the Metropolitan Fringe*.

facilitate productive manufacture of seeds and furniture, whose simple design became notorious among early twentieth-century modern design advocates.[373]

Also among the utopian communities embracing communal property were the Amana Colonies in central Iowa, which were founded in 1855 by a group of German Pietists escaping religious persecution. Having set up first near Buffalo, New York, this group found the isolation they sought in the new state of Iowa where they built several small towns each with a church, school, bakery, dairy, wine-cellar, post office, sawmill, and general store. One hundred nearly identical stone houses created capacity for each colony. The Amana Corporation's charter established communal property among all adult men, an arrangement that lasted until 1932.

The Oneida Community in upstate New York not only embraced ideas of communal property for material possessions but also for sexual partners. Its founder John Humphrey Noyes coined the phrase "free love" and advocated that sexual freedom of choice within the community removed the social problems of jealousy, possessiveness, and repression of emotions. The community built communal housing structures and a silverware factory to support itself. When the philosophical community ended in 1881, the manufacturing wing survived and became Oneida Limited, the successful silverware company.[374]

Among the most successful nineteenth-century utopian communities was The Church of Jesus Christ of Latter-Day Saints (LDS or Mormons). They called their communal embrace of resources "collectivization," and used town planning and architecture to reflect and shape their goals to establish economically successful communities based on divine revelations given to their leader Joseph Smith. Mormon towns followed a shared street grid, in which wider-than-average streets facilitated commerce and trade, and houses were arranged perpendicular to one another on alternating blocks to blur the boundaries between public and private space and promote mutual surveillance. Early Mormon architecture facilitated complex marriage and economic equality, but by the 1870s Mormons were Americanizing. Social hierarchies based on wealth and power had grown up in their communities, and they were adjusting their utopian visions to connect their industries with the booming American West. George Pullman, like most Americans at the time, certainly would have condemned the LDS practice of polygamy, but he would have known about their successful utopian town planning and may have encountered it either at Nauvoo, Illinois or in his travels to the West.[375]

Overall, a wide range of experimental solutions that combined capitalist production, social mores, and the design of residential and industrial space were well-known as Pullman formulated his plans. Charles

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[373] Stephen Stein, *The Shaker Experience in America: A History of the United Society of Believers* (New Haven, CT: Yale University Press, 1992); Sally M Promey, *Spiritual Spectacles: Vision and Image in Mid-Nineteenth-Century Shakerism* (Indianapolis, IN: Indiana University Press, 1993).

[374] Lawrence Foster, *Women, Family, and Utopia: Communal Experiments of the Shakers, the Oneida Community, and the Mormons* (Syracuse, NY: Syracuse University Press, 1992); Ellen Wayland-Smith, *Oneida: From Free Love Utopia to the Well-Set Table (Picador, 2016).* (New York, NY: Picador, 2016).

[375] Tomas Carter, *Building Zion: The Material World of Mormon Settlement* (Minneapolis, MN: University of Minnesota Press, 2015).

Nordhoff, a German-born American newspaperman, had in fact, published an extensive survey of all the then well-known (and some which are today largely forgotten) American planned communal communities—mostly those that were religiously-based—with Harpers in 1875, and debates on the ability to found and run communities on socialistic and communistic lines were quite common throughout the decade.[376] Many of these communities used architecture to communicate and create communal ties between residents, and a sense of shared purpose. Pullman intended the beauty, order, and assets of his town to do something similar: to inspire communal loyalty to the company. But he also used town planning to enforce middle-class values at home and corporate hierarchy at work.

4.D Pullman's Vision of a Model Town

4.D.1 Pullman's Inspirations

By the late 1870s, model industrial towns in Europe and the US were well-known throughout the English-speaking world, and when Pullman was contemplating his own version, we can only assume that he had some familiarity with the comparative examples discussed above. Unfortunately, we have no statement by Pullman or his associates that Saltaire or New Lanark or any other model towns were his explicit models, though most assume that Robert Owen's well-known ideas were known to Pullman.[377] Curiously, in the summer of 1881, Pullman and his family travelled to Scotland, visiting Glasgow, Inverness, Dundee, and Edinburgh. The local papers took notice and they made the connection to the idea that Pullman "has cherished for many years[:] to found a modern manufacturing town, in which free play should be given to the most advanced scientific and philanthropic opinion." The writer then explicitly invoked Titus Salt at Saltaire (judged an "imperfect conception") and Dr. Benjamin Ward

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[376] Charles Nordhoff, *The Communistic Societies of the United States: From Personal Visit and Observation Including Detailed Accounts of the Economists, Zoarites, Shakers, the Amana, Oneida, Bethel, Aurora, Icarian, and Other Existing Societies, Their Religious Creeds, Social Practices, Numbers, Industries, and Present Condition* (New York: Harper, 1875). Republished as Charles Nordhoff and Robert S. Fogarty, *American Utopias*, American Classics (Stockbridge, MA: Berkshire House, 1993). See the interesting review that noted one could learn a lot from these "quaint and shrewd societies" at "*The Communistic Societies of the United States; from Personal Visit and Observation; Including Detailed Accounts of the Economists, Zoarites, Shakers, the Amana, Oneida, Etc.* By Charles Nordhoff. With Illustrations. New York: Harper and Brothers. Pp. 439," *The North American Review* 120 (1875). *The Boston Globe* also noted that "these associations, while not desirable for imitation as a whole, yet furnish illustrations of industry and self-denial which may be useful in stimulating similar qualities among people in general society;" "Nordhoff's Communistic Societies of the United States," *The Boston Globe*, Jan. 27 1875. Nordhoff also had some curious economic arguments against slavery with respect to working men a decade before: Charles Nordhoff, *America for Free Working Men! Mechanics, Farmers and Laborers Read! How Slavery Injures the Free Working Man. The Slave-Labor System the Free Working-Man's Worst Enemy* (New York: Harper & Bros., 1865).

[377] Wright, "A Community in a Garden: The Pullman Paradigm in Southern Illinois."; Thomas J. Schlereth, "Solon Spencer Beman: The Social History of a Midwest Architect," *Chicago Architectural Journal* 5, no. 1985 (1985).

Richardson at Hygeia ("a Utopia" whose "city of health" was deemed unrealizable).[378] Pullman, with his unlimited capital, insatiable demand for his product (and thus huge demand for employees), had an opportunity that no one man had hitherto had: "The experiment is a noble one … and the scale on which it is tried makes the trial an epoch in the history of social philanthropy."[379]

We have little indication of exactly when or why Pullman decided to create a model industrial town. Despite all the media attention and company promotion, he never provided an origin story, as it were, for his idea. Like many of his compatriots, Pullman worried about the rapidly changing social relations in American society. Historian Stanley Buder argued in 1967 that Pullman worried both about keeping labor relations peaceful at his newly successful company, and about the growing problems of urban poverty under his nose and those of his peers.[380] Having survived the 1873 economic downturn and watched the nationwide labor unrest that came to be called the Great Upheaval of 1877, Pullman understood that a stable labor force meant good business. Pullman never credited a direct inspiration for his town, claiming only that its orderly systems were in "natural logical sequence" with his company. Toward this end, he embraced the paternalistic company town approach that had been used in New England textile towns, combined it with newly professionalized approaches in design and planning, and incorporated it into his supreme faith in his corporation's ability to shape social improvements. As Buder put it, "Pullman wanted to perfect, not alter, free enterprise."[381]

This ultimate combination of influences made Pullman different, in some ways, from many planned model towns before and after it. A primary difference between Pullman and both New England mill towns and mining towns was its independence from geographical requirements. Pullman did not need to rely on a river for power (though he needed good navigation) nor did he need to locate near resources to be extracted. He had the freedom to choose the location for his town. His choice to build on the far outskirts of Chicago gave him both more control and also removed his town from the preconceived notions about the city. Anti-urban sentiment was already festering in the American imagination in which picturesque suburban ideals carried considerable cultural weight. The "machine in the garden" idea tempered the anxiety about enormous and new technologies and labor arrangements

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[378] In 1875, Dr. Benjamin Ward Richardson (1828–1896) proposed a model city of "Hygeia: a city of health" based on sound sanitary science as his presidential address to the health department of the Social Science Association at Brighton: Benjamin Ward Richardson, *Hygeia, a City of Health* (London, UK: Macmillan & Co, 1876). This was reprinted as Robert Pemberton, ed. *The Happy Colony* (New York, NY: Garland Press, 1985).

[379] "Founding a City," *Annandale Observer and Advertiser*, July 29 1881, 257. Despite the praise, the correspondent from the Glasgow News ended on a pessimistic note: "if, in spite of their beautiful houses, their shady walks, their Parks, their schools, their churches, their libraries, their art galleries, and their clubs, they will have that which must introduce a powerful influence for evil, there would seem to be nothing left to the philanthropist but to weep over the incurable and inexplicable perversities of human nature."

[380] Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 37.

[381] Ibid.

that were driving the new industrial economy.[382] Pullman not only built a town that embraced middle-class ideals of domesticity by separating home from factory (at least nominally), he also separated his entire town from the industrial city. He hoped for a *tabula rasa* in which to shape the feelings of his workers and indeed the world about his company and its figurehead.

Another factor setting Pullman apart was the number of and degree to which service industries remained under his control once built. As planning historian Margaret Crawford argues, Pullman's control exceeded even the "closed" mining towns on the resource frontier. The Arcade was filled with retailers who had to apply for a retail space; Pullman would not rent the theater to a third party so that he could personally approve the propriety of the performances; the library had a $3 membership fee and the librarian lived in an adjacent apartment; the hotel lodged the company's visiting associates and served as their *de facto* greeting center; all the utilities sprung from company-run technologies; and even the railroad transportation was operated by Pullman partners. Excluded amenities—like saloons and a hospital—also indicated Pullman's priorities. This total control modeled corporate efficiency and the principles of scientific planning.

Driving Pullman's combination of manufacturing and community planning was the quintessentially industrial goal of efficiency for profit. At the dedication of the Pullman Library, Professor David Swing recognized Pullman as one in the long line of experimental and planned communities of people like George and Sophia Ripley or Robert Owen, but suggested that "The Moral quality or basis of Pullman is not abstract philosophy or socialism like that of… New Harmony, but is common sense of the highest and best order. Industry, and economy, and comfort are the foundation stones of this latest and wisest experiment." Efficiency in all things, it seemed, would bring benefits both financial and social. At Pullman, "industry, sobriety, [and] economy," coupled with each man (family) having a clear means of support in the employment of the Pullman Palace Car Company, the perfect experiment had been created. Swing avowed that "industry will always surpass philosophy as the basis of welfare" in this new town.[383] Moreover, Swing expressed even more bluntly that the town would always be in service to profit. "To employ extra capital in building decent villages for humanity is as wise as it is new and beautiful." Rather than put that capital into government bonds to merely earn interest, "Four per cent cottages are a nobler investment."[384]

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[382] Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America* (Oxford, UK: Oxford University Press, 1967).

[383] David Swing, "The Pullman Library Dedicatory Address," *The Library Journal* 8, no. 5 (1883).

[384] "Pullman. The Young City Presented with a Full-Grown Library by Its Enterprising Founder," *Chicago Tribune*, Apr. 12 1883; Messer-Kruse, "The Yankee International: Marxism and the American Reform Tradition, 1848-1876," 236-40; Holly Jacklyn Blake, ""Dependency Is Not Charming": Marie Howland on Women, Class, and Community, 1836-1921" (Ph.D., SUNY-Binghamton, 2002); "Marie Howland: 19th-Century Leader for Women's Economic Independence," *The American journal of economics and sociology* 74, no. 5 (2015).

4.D.2 Roots in the Housing Reform Movement

Pullman's ideas for his town also grew out of the housing reform movement. Like model town builders, housing reformers believed in environmental determinism and the power of architecture and orderly surroundings to inspire America's poor toward economic and social betterment. As Pullman explained to a *Cincinnati Enquirer* reporter in 1882, "everything depends upon surroundings."[385] These ideas began to coalesce among the urban well-to-do as industrial production necessitated concentrated populations and accelerated immigration.[386] Urban crowding and undeveloped sanitation systems posed very real health risks, but the concentration of immigrant families also felt threatening to the people already ensconced at the top of the established social hierarchy.[387] Thus, housing reform movements began to appear nationwide in the 1840s, when the first large waves of immigration from Ireland began.[388] Rapid urban growth after the Civil War, with newcomers from all over Europe and elsewhere, inspired widespread campaigns to both combat slum conditions and insulate established Americans from their physical and perceived moral threats.

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[385] Stanley Buder, "The Model Town of Pullman: Town Planning and Social Control in the Gilded Age," *Journal of the American Institute of Planners* 33, no. 1 (1967).

[386] Wright, *Building the Dream: A Social History of Housing in America*, 114-34; Paul Boyer, *Urban Masses and Moral Order in America, 1820-1920* (Cambridge, MA: Harvard University Press, 2009).

[387] Alan Trachtenberg, *The Incorporation of America: Culture and Society in the Gilded Age* (New York: Hill and Wang, 1982), 48.

[388] Philpott, *The Slum and the Ghetto: Neighborhood Deterioration and Middle-Class Reform, Chicago, 1880–1930*.

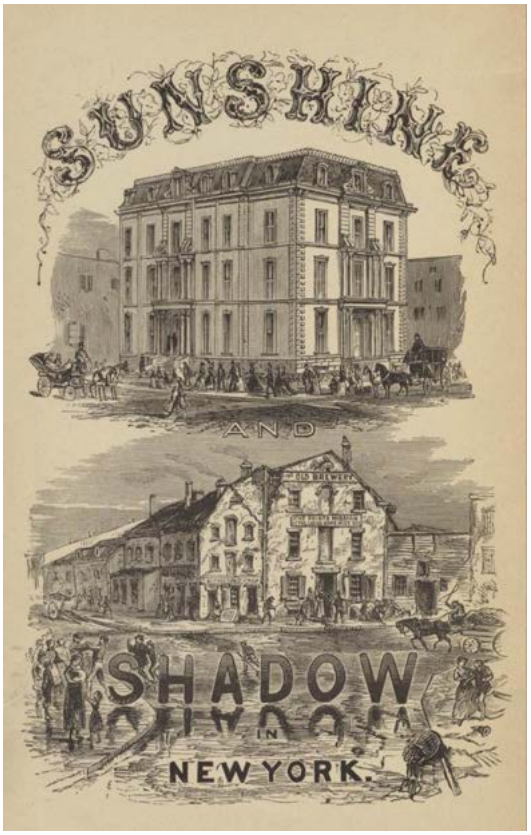

Figure 4.4. Sunshine and Shadow in New York City. From Matthew Hale Smith, Sunshine and Shadow in New York *(Hartford: J. B. Burr and Company, 1868), frontispiece.*

Pullman's model town pre-dated the most famous housing reform institutions in the nation and Chicago, such as Hull House and New York's Tenement House Committee, not founded until 1889 and 1898 respectively. Pullman's model town, however, followed in the footsteps of several private endeavors that tried to build profitable housing for the poor in America's other large cities. The Boston Cooperative Building Company, for instance, was formed in 1871 by prominent Boston investors to rehabilitate tenement dwellings and their residents. Alfred T. White tried to build large apartment buildings for the "laboring classes" in Brooklyn in the 1870s. He believed the problem with tenements lay with the landlords who extorted poor laboring residents for their own profit. He popularized this solution: wealthy businessmen could build decent housing, charge reasonable rent that workers could afford, and still make a 7% profit. Despite the fact that this model tenement movement failed to profit

anyone or to ameliorate the long-term living conditions of their residents, investment-led development continued to attract followers, including George Pullman.[389]

George Pullman was already involved in housing reform efforts in Chicago when he developed his model town.[390] He and Marshall Field, one of the city's other leading businessmen, had been leaders of the Relief and Aid Society set up immediately after the fire of 1871. That system had taken distribution of relief funds out of the hands of the aldermen and given it to the city's unelected millionaires.[391] That work fed into The Citizens Association, founded in 1874, to continue to improve building regulations as the city rebuilt. The Citizens Association was among the leading groups campaigning for a tenement inspection program, an idea that came to fruition in 1876 with the appointment of Oscar Coleman de Wolf as first chief of the city's Health Department. With Pullman's support, de Wolf began inspections in 1877, which sent city officials into working class homes unannounced (an action whose legality remained in question for several years but eventually was exonerated.)[392] His report of 1878 convinced industrialists and reformers across the city that urban tenements posed a health risk to the city of Chicago.[393] Without question, Pullman's close involvement with these findings influenced his model town experiment.

Part of Pullman's goal was to demonstrate that good housing for workers could be both morally uplifting and profitable. Leaders in this early phase of housing reform fervently believed in White's idea in the market's ability to solve the housing problem. The experiment at Pullman sought to demonstrate this by offering new high-quality architecture for workers while maintaining 6% income for company investors. Chicago's slum conditions differed from those in New York and Boston, where working immigrants were occupying haphazardly retrofitted buildings from the colonial and early national periods. In Chicago, the housing may have been much newer but its quality varied considerably. Despite pushes for post-fire Chicago to be built of brick and stone, thousands of housing units were built of wood to accommodate

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[389] David P Handlin, *The American Home: Architecture and Society, 1815-1915* (Boston, MA: Little, Brown, 1979), 252-66; Buder, "The Model Town of Pullman: Town Planning and Social Control in the Gilded Age," 40-41.

[390] Buder, Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930, 34–37.

[391] Elaine Lewinnek, *The Working Man's Reward: Chicago's Early Suburbs and the Roots of American Sprawl.* (New York: Oxford University Press, 2014), 40; Karen Sawislak, *Smoldering City: Chicagoans and the Great Fire, 1871-1874* (Chicago, IL: Chicago University Press, 1995), 82-83; Smith, *Urban Disorder and the Shape of Belief: The Great Chicago Fire, the Haymarket Bomb, and the Model Town of Pullman*, 68-69.

[392] Margaret Garb, "Health, Morality, and Housing: The 'Tenement Problem' in Chicago," *American Journal of Public Health* 93, no. 9 (2003).

[393] Gail Radford, "Housing Reform," in *The Electronic Encyclopedia of Chicago* (Chicago, IL: Chicago History Museum, 2005).

the incredible demand among workers who wanted to own but could not afford the more expensive fireproof materials.[394]

4.D.3 New Approach to Design and Town Planning

Pullman's approach to planning his new model town showed a growing faith in design professionals and grand industrial visions. Several period writers noted that architect Solon Spencer Beman had landed the enviable and seemingly singular job of designing an entire city in one fell swoop.[395] While Pierre L'Enfant, the French landscape designer famous for laying out the capital city in Washington provided a plan for Paterson, NJ and reformers had begun working with architects to build settlement houses, no architect and landscape engineer had been hired in the US to collaborate on one big project at the same time. Together with landscape architect Bene Williams, these professionals, trained in the new credentialing schools of the late nineteenth century, mobilized their patron's ambition and wealth to realize the dreams of industrialist dreamers around the world. In many ways, it combined the ideals of several engineering and design subspecialties and actualized them together all at one time.

Figure 4.5. S.S. Beman, Arch., Barrett Landscape arch., Hughson Hawley artist / Pullman 1883. From "S. S. Beman," Print / Photo file, Chicago Historical Society.

In order to abide by the PPCC's charter, which only allowed the company to own land that directly contributed to its production, company leaders created the Pullman Land Association to make owning

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[394] Lweinnek, *The Working Man's Reward: Chicago's Early Suburbs and the Roots of American Sprawl*, 51-63.

[395] "The Arcadian City of Pullman." F.A. Ely, "Report of Sleeping Car," General Ticket Admissions (Pullman Palace Car Co., 1877).

this new town appear legal. The Land Association existed on paper for the next three decades but for all intents and purposes was operated as part of the PPCC. More research into the land transactions by which the company acquired hundreds of acres could illuminate how Pullman balanced where to site his town with the realities of the real estate market.

Pullman's hiring of both architect Solon Spencer Beman and landscape architect Nathan F. Barrett marked the first time that practitioners in both fields collaborated to plan an entire town. Barrett had worked for George Pullman before, on his New Jersey estate, and had introduced him to Beman. Beman then worked on remodeling Pullman's Prairie Avenue mansion and the two men got along well. The company's new model town offered a welcome opportunity for the three men to collaborate. It laid the foundation of professional working relationships that would last until Pullman's death, the inner workings of which deserve additional research.[396] Also significant was Beman's commission as an architect to design industrial factory buildings, which had generally been the realm of engineers before this time. Beman's careful consideration of aesthetic beauty to the factory as well as the town, and their visual connections, make Pullman unusual.[397] Pullman's recognition of professionals for designing both the buildings and their surroundings, and having a trained architect for the civic, residential buildings, and industrial structures, all elevated the role of aesthetics and professional expertise in the eyes of the public and Pullman's industrialist circle.[398]

4.D.4 Housing and Social Hierarchy

A primary feature of Pullman's town was the physical manifestation of social hierarchy built into domestic surroundings. Hierarchy was common in company towns, especially in remote places, and it enforced the workplace chain of command of managers over foremen over workers in the domestic sphere in order (companies assumed) to normalize the power structure that supported production. Pullman rarely described the hierarchy built into his town, focusing instead on his theory that clean and beautiful surroundings would keep workers out of poverty and away from alcoholism and promiscuity. Nineteenth-century America's obsession, however, linking one's domestic surroundings with one's moral standing and social identity dictated that Pullman provide status-conscious housing options to the full spectrum of his employees. The nature of his project, therefore, necessitated housing units at varying levels of status. Status in Pullman houses was determined by size and amenities, much like in any other American town, where rent depended on these factors. One difference in Pullman, however, is that style was taken out of the equation since all units had a shared aesthetic.

Beman developed several types of housing units whose price points would reach a broad spectrum of Pullman's employees. A systematic study and mapping project is needed to create a typology of house types based on floor plan, utilities, and rent prices. This would expand the existing façade study by the Beman Committee to focus on the factors that mattered to residents at the time, namely number and

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[396] Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 50.

[397] Betsy H. Bradley, *The Works: The Industrial Architecture of the United States* (New York: Oxford University Press, 2011).

[398] Buder, "The Model Town of Pullman: Town Planning and Social Control in the Gilded Age."

arrangement of rooms, amenities, and rents.[399] This kind of study would greatly aid interpretation of social hierarchy in Pullman.[400] It would also considerably augment future projects to map residents through time to specific houses in the town.

One social dividing line that the town of Pullman did not build into its architecture, per se, was the racial line. The boundary of the town itself, rather than hierarchical features of its architecture, divided white and black Chicagoans in Pullman. George Pullman never envisioned that his town would house black residents. Renters had to be employees of the PPCC and Pullman did not hire African Americans in his factories. Through this policy, employment discrimination begat housing discrimination. In the 1880s, before the Great Migration, African Americans tended to live near their places of employment just like other ethnic groups, and since they were not allowed to work in Pullman, they did not live there. The living arrangements for African American porters should be studied using the employment records at the South Suburban Genealogical Society and elsewhere. In later years, people questioned why Pullman chose to create good jobs for African Americans as porters but not supply them with housing. The fact that Pullman never addressed the disparity of this choice, and indeed that few in the period questioned it, highlights the overwhelming norm of racial segregation in housing.

4.E The Town of Pullman

4.E.1 Pullman Community Buildings

Pullman's vision to create beautiful and wholesome surroundings to uplift his employees rested in large part on building the best facilities. The design for his original town included many amenities that would have been present in most towns: a school, a church, a theater, and a library. Other amenities were innovative either architecturally or in function, including the arcade building, marketplace, athletic facilities, and in some ways the Hotel Florence.

Beman designed many non-residential buildings to fulfill George Pullman's visions. They housed services and amenities that in most towns would be considered "public" spaces, and in day-to-day functioning they felt public. In a closed company town like Pullman, however, the democratic notion of tax-payer-supported shared facilities did not apply. Pullman never guaranteed equal access, shared authority, or collective influence over the activities in these spaces. The library, for instance, was not a "public library"

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[399] Thomas C Hubka, *Houses without Names: Architectural Nomenclature and the Classification of America's Common Houses*, Vernacular Architecture Studies (Knoxville, TN: University Tennessee Press, 2013); Hoagland, *Mine Towns: Buildings for Workers in Michigan's Copper Country*.

[400] The Beman Committee of the Pullman Civic Organization's "Façade Legacy Project" (2013) itemized and created excellent drawings of the 79 façade types, as well as window, door, and porch types to help current homeowners restore their houses. A companion study for northern Pullman will require additional funding. A similar study that addresses floor plans, original amenities, and original prices for all housing in Pullman 103rd Street to 115th Street would be a helpful next step in understanding hierarchy and daily experience for employees and their families. All of this work would benefit from access to the Historic Pullman Foundation's collections, which were not made available for the first Façade Legacy Project or the current Historic Resources Survey. The Façade Legacy Project Final Report is available for download: http://www.pullman-museum.org/facades/facadeReportFinal.pdf.

(though commentators called it that frequently), but rather a subscription-based option for employees, access to which they would lose if they lost their job. Until the various facilities came under the auspices of the city government, none of these could be called public. Instead, they need to be understood as important elements in Pullman's paternalistic management of his town.

Taken together, the town of Pullman, with its many amenities all offered under close control of George Pullman and his officers, can be seen as a final chapter in the nineteenth-century industrial model town idea that developed in Europe over the previous century. Saltaire and Guise had offered similarly extensive lists of amenities, but no single company or person in the United States attempted to mimic that on as large a scale as Pullman did. The brief accounts of the buildings below address the contexts of architecture and paternalism in the town's first few decades.

The Arcade

The Arcade Building was by far the largest non-factory building constructed at Pullman, being 250 by 166 feet and ninety feet tall. It is the closest thing to a public space that Pullman imagined, containing stores, offices, a theater, the library, the post office, and lodging rooms. The building featured central doors on each façade to facilitate a perpendicular bisected interior floor plan. The west façade, which faced the railroad, was the tallest with three stories of complex massing and cross-gabled hipped rooflines, and a fourth story with clerestory windows in a central square tower. The other three façades had similar profiles, with two main stories as well as a central two-story tower with a tall mansard roof and decorative ridge cresting. Each central doorway was flanked by projecting classical porticos whose engaged pilasters defined three tall arched windows. The building featured brick construction over a massive limestone foundation whose rough-cut surface constituted much of the first-floor façade. Dressed limestone also surrounded the doorways, articulated first floor windows, and created a belt course at the second floor visually connecting each façade. Overall, the structure's combination of classical forms and symmetry with the nineteenth-century taste for varied colors, surface textures, and historical ornament all in the pursuit of consumption and morally approved entertainment and education, perfectly encapsulates Pullman's vision in one very large building.

Figure 4.6. Pullman Arcade. Pullman State Historic Site.

Arcades had gained popularity in mid-nineteenth-century Europe but Pullman's was among the first built in the US Margarita Doty, the wife of the town manager who wrote a glowing guide to the town in 1893, explicitly compared it to ancient and modern arcades in Paris, Stuttgart, and Milan. She mentioned American examples in Cincinnati and Cleveland. The Cincinnati example, known as the Emery Arcade, was built in 1877 but was much more modest than Pullman's. Cleveland's was not erected until 1890.[401] Others followed Pullman's including one in Buffalo (1892) and, most notably, the Rookery in Chicago (1888). Modern arcades, defined by open walkways between units, usually stores in nineteenth-century iterations, were being reimagined because of advances in load-bearing iron construction members and plate glass technology, which could accommodate well-lit larger and taller spans. The Rookery, an early accomplishment of John Wellborn Root and Daniel H. Burnham, combined masonry and steel construction in what historians today regard as an important stepping-stone toward the steel skyscraper architecture that Burnham and Root would pioneer just a few years later. Beman's Arcade in Pullman employed masonry construction, but the ambitious use of steel and glass to span the atrium

[401] Mrs. Duane [Margarita Jane Richards] Doty, *The Town of Pullman: Its Growth with Brief Accounts of Its Industries* (Pullman, IL: T.P. Struhsacker, 1893), 8.

was innovative in the United States at this scale. Within a decade of Beman's arcade being built this kind of architecture was developed into the department store, again pioneered in Paris, whose tall open interior spaces elegantly appointed with wrought-iron staircases and decorative colored glass became early cathedrals of commerce. Pullman's arcade, then, is significant not only architecturally but also as the only ambitiously scaled retail and services building incorporated into a company town project in the US at this time. The Arcade was torn down in 1927.

Figure 4.7. Interior of the Arcade showing masonry construction and steel and glass atrium span. The Pullman State Historic Site. Collection: Industrial Heritage Archives - Pullman State Historic Site. Arcade Building Interior" The Pullman State Historic Site Collections. Accessed 2019-08-23. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=14193

The Library

George Pullman created a library for his town inside the Arcade building. Although we take for granted the concept of the public library today, even if it is under siege and having to change with the times, in 1880 it was far from a given that a town would have such an amenity. The development of the library movement, most typically associated in this time with the Mechanics' Institute movement found more strongly in the UK and its colonies (though those institutions were designed to have instructional classes as well)[402] was later closely associated with Andrew Carnegie. Andrew Carnegie's bequests of public libraries, for example did not begin until the late 1890s and although some cities may have had subscription libraries since colonial times, and the main four of five American cities did have public

[402] Walker, *The Development of the Mechanics' Institute Movement in Britain and Beyond Supporting Further Educations for the Adult Working Class*; James G Kelso, "The Lyceum and the Mechanics' Institutes: Pre-Civil War Ventures in Adult Education." (Harvard University, 1968); Arlene Ann Elliott, "The Development of the Mechanics' Institutes and Their Influence Upon the Field of Engineering: Pennsylvania, a Case Study, 1824-1860" (University of Southern California, 1972); Burton J Bledstein, *The Culture of Professionalism: The Middle Class and the Development of Higher Education in America* (New York, NY: W. W. Norton, 1978).

libraries by the first third of the eighteenth century, most other cities and towns did not get a public library until the twentieth century. Pullman created one from the very beginning with an initial deposit by George Pullman himself of 5,100 volumes (with another 4,500 promised) for the leisure—but more important, of learning and moral uplift—for his workers. For, as he said in the grant of the books, "the moral and intellectual growth of any community promotes and advances not only all of its material interests, but all the forms of human welfare."[403]

This was an age where the idea(l) of public uplift played on opulent men's clubs in that luxurious surroundings themselves were seen to elevate the common man or woman. Located on the second floor of the Arcade building and entered from the balcony of the main atrium, the library featured a 42 by60 foot cherry-paneled den of relaxation on "large and easy" black wicker chairs "with plush backs and seats" or on "quaintly designed" lighter English oak chairs. The walls were paneled in cherry-stained ornamental wainscoting, "heavily carved cherry tables covered with crimson billiards cloth" stood ready on "very rich" Axminister carpets for readers, and south facing windows with stained glass transoms illuminated the room (and six gilded chandeliers served the purpose in the evening). Lavender walls with a broad frieze of gilt tracings of lilies and reeds in the Egyptian style lined the room—"frescoed in peacock colors," as one review said—and a stained-glass skylight on carved columns was surrounded by the glass-fronted book cases around the room. Alcoves were dedicated to the dozens of subscriptions to newspapers, periodicals, and "works of science of the day" that the library maintained. There were retiring rooms—three for ladies and one for men—for quiet reading spaces and an art study room that quickly generated a well-subscribed art class. Various courses began to be held there, even including one in German given by Professor Henry Cohn of Northwestern University in Evanston. The library "sought to furnish all private Chautauqua and other clubs with standard authorities upon all subjects under discussion." The librarian had her apartments adjacent (at least until she married, much in the model of the house staff in an English great house) and membership grew to the low hundreds by 1890 with 1,500 or more visiting monthly just to read or hear one of the regular lectures.[404]

One of the contemporaneous paternalist principles in the later nineteenth century was that greater exposure to mainstream culture would uplift workers. Pullman was no exception. The library there was developed at the beginning of the town by George Pullman's long-time private secretary Lucy D. Hall (she married Fred L. Fake in late 1887),[405] with the advice of William Frederick Poole, the first librarian of the Chicago Public Library (founded in 1871 as a result of the great Chicago fire) and later director of the Newberry Library (founded 1887). Fake was in charge of purchasing the library books directly from the publishers and "the large and comprehensive list of books" filled a new library, also designed by Fake, in the Arcade building that was praised as "one of the most complete and perfect libraries in the state, not a single detail has been overlooked and its arrangement in the most particular minutia has been carefully observed."[406] And indeed, the library became for a time a model that others investigated:

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[403] "Pullman. The Young City Presented with a Full-Grown Library by Its Enterprising Founder."

[404] "The Arcadian City of Pullman," 79-80. Also, Pullman records, Newberry Library, 09/00/03 bx.2 fol.99.

[405] *The Arcade Advertiser* (Pullman, IL), 22 Oct. 1877 [Newberry Library, Pullman Scrapbooks, vol. 2, p. 4].

[406] "Women's Department," *The World's Columbian Exposition illustrated* 2, no. 10 (1892): 284.

before the First International Conference of American States (known as the "Pan-American Congress") met in Washington, D.C. in early 1890, they visited Pullman to see the great experiment and all autographed the library's register.

At the opening of the library, professor David Swing (1830–1894), a preacher who had left the Presbyterian Church (under a certain degree of pressure because of his more ecumenical approach to theology) to found his own Central Church in Chicago in 1874, and who was among the most popular preachers of his day, asked whether, "a business firm [can] afford to furnish libraries for artisans." He noted that they certainly can afford it financially, they can afford to be "kind to their men," and more importantly, they "cannot afford to build up self at the cost of the workmen."[407] Speaking to a "large and brilliant assemblage" of Chicago notables, Swing recognized that the whole Pullman experiment was about "how cities should be built and in general [about] how man should live." These normative questions were of crucial importance in the built environment of Chicago at the time, which Swing compared to a bunch of barnacles on a ship's hull, resulting from the lack of enough central planning—i.e., "law of chaos"—from its inception (but also after the Great Fire). Arguing in effect for what we would today refer to as setbacks and zoning requirements, Swing said that Chicago *could* have been Paris or Brussels, both of which were redesigned with a master plan in the early nineteenth century, but for having had a visionary like Pullman as it was building out. Now, on the smaller scale, Pullman had pulled it off with residences, industry, relaxation and commerce all balanced and in harmony: "the material symmetry of this new city is … the outward emblem of a moral unity among its inhabitants."[408]

The library, however, never had more than a few hundred members though circulation rose over time. Employees were required to pay a $3 annual fee to be library members, and $1 for their children. The fees, it was believed, would make users value and respect the books and experience of leaning more broadly. Large shelves, richly upholstered furniture, heavy oak furniture, and gas lighting all would have felt somewhat intimidating to average workers, but generally gave an atmosphere of elevated learning. The pared-down room with simple jute floor coverings and caned chairs to accommodate men coming directly from the factory in soiled clothes could be seen as both considerate and exclusionary.[409]

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[407] David Swing, *David Swing: A Memorial Volume: Ten Sermons, Selected and Prepared for Publication by Himself* (Chicago: F. Tennyson Neely, 1894); "The Pullman Library Dedicatory Address." The evening's entertainment also included a benefit performance by the Pullman Amateur Dramatic Club of "The Two Roses" (presumably James Albery's strained by clever comedic play, which was popular at the time) and the Illinois Central ran a special train from downtown Chicago for the evening; *Chicago Tribune*, 8 Apr 1883, p. 21.

[408] "Pullman. The Young City Presented with a Full-Grown Library by Its Enterprising Founder."

[409] Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 62.

Figure 4.8. Interior of the Pullman Library, c.1883. The Pullman State Historic Site. Collection: Pullman State Historic Site. Arcade Interior Library" The Pullman State Historic Site Collections. Accessed 2019-08-30. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=15183

By the time that company sold off the town, the model of public libraries had fully taken hold around the country. George Pullman's widow purchased the Arcade and allowed the library to remain rent free. She insisted on keeping the fee structure at first, but by 1908 the library became the Pullman Public Free Library.[410] By that time, even paternalistic company towns had opened their libraries to some degree. The Calumet & Hecla Mining Company in Michigan had built a large library in 1898 that allowed free access for its employees in good standing. The C&H Library tried to appeal to its heavily foreign-born workers by carrying newspapers from around the world, an approach the Pullman Library did not take.

The Theater

The theater occupied a primary location inside the Arcade's second floor. As described by Mrs. Doty, it seated almost 1000 people and was a prime specimen of Aesthetic Movement fashion and period theater design. The interior boasted what was called Moorish decoration, with complex arches, intricate gallery railings and screens, turrets, and rich textiles and paint colors all imitating the Islamic traditions carried to the Iberian peninsula in the eighth and ninth centuries. The taste for co-opted Middle Eastern patterns and textures, fueled in the United States by the Centennial Exhibition of 1876 in Philadelphia,

[410] Kate Corcoran, "The Pullman Library," The Pullman State Historic Site, http://www.pullman-museum.org/theTown/pullmanLibrary.html.

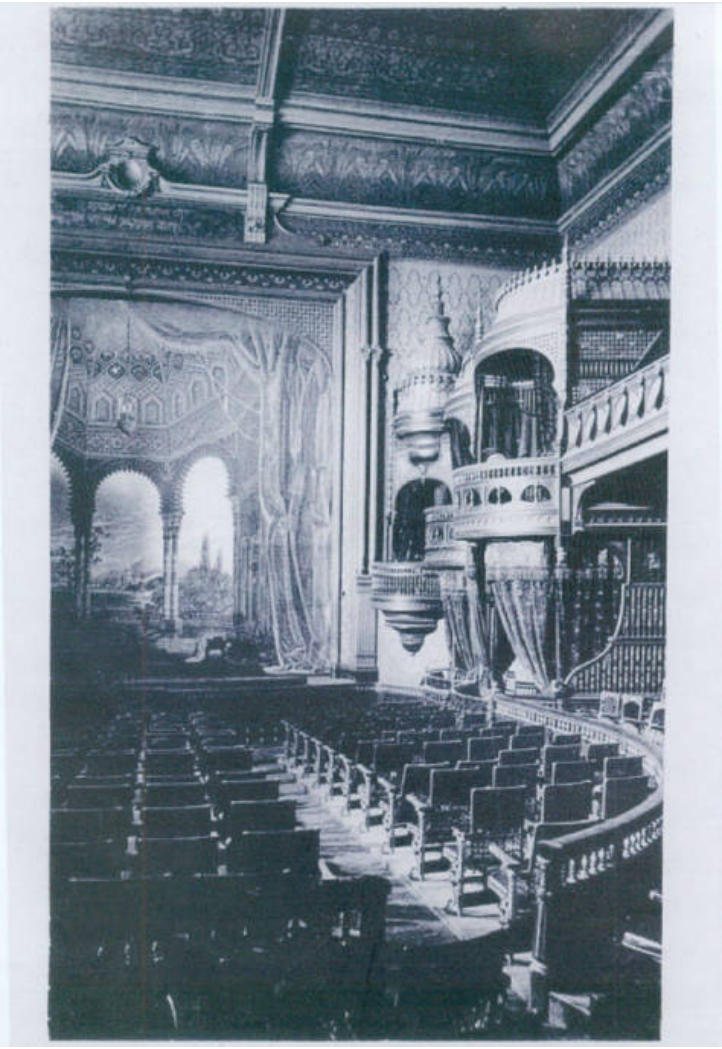

Figure 4.9. Interior of the Theater demonstrates what would have been called Moorish style theater, a fashion very popular in the 1880s as Americans domesticated what they saw as exotic global influences. The Pullman State Historic Site. Collection: Pullman State Historic Site. Arcade Building Theatre Interior" The Pullman State Historic Site Collections. Accessed 2019-08-23. (http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=14481)

appeared in public places of leisure like theaters as well as elite parlors and clubs.[411] Mrs. Doty showed an unusually high level of self-consciousness about this cultural appropriation when she noted that "a little liberty has been taken… in one of two instances; for example, in the introduction of the dragons in the corners of the ceiling, contrary to the laws of the Koran, which forbid the imitation or distortion of any living object."[412]

Fitting the theater into the context of paternalistic town planning again sets Pullman apart in the United States. Precedent for an entertainment venue built by a company existed in Saltaire, which had a concert hall. Pullman may have been the only company to include a theater in his vision for a company town. He did see it, as Sir Titus had in Saltaire, as part of the educational and cultural edification of his employees. Pullman also, of course, designed it to make money, though more study is needed to determine its profitability.

The Market Hall

The Market Hall along with the Arcade building stand out among company towns as an ambitiously scaled structuring of retail, commercial, and business functions. While the Arcade featured retail shops and centers for entertainment and personal edification, Market Hall offered more quotidian shopping needs including fresh produce and meats.

The original Market Hall featured two stories and an exterior whose limestone foundation matched the Arcade but whose upper floors featured the shingle style half-timbering of the Stables and Casino. It was ruined by fire in 1892 and rebuilt within the year. The second Market Hall, also designed by Beman, offered three stories with a more classical appearance, indicating the architect's attention to changing styles (Beman would have been getting involved at that time with the Beaux-Arts designs for the White City). The brick façade covered a timber and iron structural frame, perhaps chosen for fire protection. The new Market Hall had stalls for sellers on the first floor, offices on the second floor, and a large hall on the third floor featuring a stage and dressing rooms for performances. At the same time, Beman designed four large dwelling houses in the four corners of the Market Square, each with arched colonnades.[413] A full collection of blueprints for the second Market Hall and the Market Square Dwellings survive in the Burnham Library at the Art Institute.[414]

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[411] Doreen Bolger, ed. *In Pursuit of Beauty: Americans and the Aesthetic Movement* (New York, NY: Metropolitan Museum of Art/Rizzoli, 1986).

[412] Doty, *The Town of Pullman: Its Growth with Brief Accounts of Its Industries*, 16.

[413] Ibid., 177–78.

[414] Town of Pullman, Illinois, Microfilm Reel 39, Frame #117–149, Architectural Microfilming Project, Burnham Library, Art Institute of Chicago, 1976.

Figure 4.10. The first Market Hall c. 1883. The Pullman State Historic Site. Collection: Industrial Heritage Archives - Pullman State Historic Site. Market Hall" The Pullman State Historic Site Collections. Accessed 2019-08-27. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=14586

Figure 4.11. Second Market Hall, built 1893, postcard published by J. C Ferrin, n.d. The Pullman State Historic Site. Collection: Pullman State Historic Site. Market Hall" The Pullman State Historic Site

Collections. Accessed 2019-08-27. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=17213

The centralized retail model in this building again sets Pullman apart from other company towns, and indeed from other American towns in general. In the 1880s, most towns featured a business street with a line of commercial buildings or "blocks" with businesses on the first floor and apartments on the upper floors (traditionally to house the shopkeeper, though that pattern was beginning to break down with expanding industrialization). Stanley Buder could not find "any prior precedent for the centralization of commercial activity," and indeed models are difficult to identify.[415] Saltaire featured a line of shops near the factory with a bank spread out on the other side of town, much like other Anglo-American towns at the time. Godin's industrial commune in France featured shops in a company-owned building that could have influenced Pullman, but of course the socialist vision at its heart contrasted with Pullman's capitalist outlook. The infamous closed company towns of Pennsylvania's coal fields were developing at this time, but in relative geographic isolation with few other options. In Michigan's Copper Country, by contrast, company officials chose not to control retail operations and instead to sell non-mining land to trusted entrepreneurs to set up towns and develop independent businesses.

In contrast to all of these, Pullman's Market Hall and Arcade buildings consolidated businesses into company-owned buildings designed in innovative ways to accommodate shopping and commercial purposes. On the one hand, this model promoted independent businesses rather than a "company store," and offered some accommodations to shoppers, namely relief from inclement weather and the convenience of what today would be called "one-stop-shopping." On the other hand, the ultimate beneficiary was the Pullman Company, who charged high rents to shop keepers to maintain the required profit margin. More research could reveal Pullman's immediate inspiration for Market Hall and the Arcade, but most likely he was inspired by the European arcades and their ability to consolidate retail space into one rental facility that would be easier to manage than renting the dozens of store fronts typically found in a town's commercial area. Dividing the food from the Arcade shops showed a hierarchy between the smells and mess of daily meal preparation from the more fashionable shopping experience created in the Arcade.

[415] Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 68.

Figure 4.12. Broadhead Meat Market, inside the second Market Hall, 1895–1900. The Pullman State Historic Site. Collection: Pullman State Historic Site. The Broadhead Meat Market" The Pullman State Historic Site Collections. Accessed 2019-08-27. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=11827

The second Market Hall was reduced to one story by another fire in 1931. A tavern and grocery store operated there until 1973 when another fire gutted the remaining structure. The Historic Pullman Foundation has owned the ruins since 1974 and uses it for contemporary art and seasonal decoration. Debates in the town about how to save Market Hall's remnants and how to use it constitute a major aspect of late twentieth-century heritage in Pullman.

The Greenstone Church

Pullman and Beman built just one church in their model town. What came to be called the Greenstone Church stands at 112th Street and St. Lawrence Avenue on the corner of Arcade Park. Pullman understood that his employees would want churches in their town, but he did not see the need for his company to build too many, since they offered little profit. He built one, eminently visible to portray an outward portrait of his town's morality, and he allowed any congregation to rent it. His own roots in the Unitarian Universality society led him to hope that his employees would combine their traditions and worship together. In 1881, however, before the church building had even been completed, it became clear that Pullman employees (like Americans across the country) preferred to worship in their own familiar languages and traditions. Mrs. Doty lamented the failed multi-denominational Union Church by

writing that “Only a few men are broad enough to listen with patience to any but their own preachers.”[416]

Figure 4.13. Greenstone Church (identified as Presbyterian), 1880s. The Pullman State Historic Site. Collection: Pullman State Historic Site. Greenstone Church 1883” The Pullman State Historic Site Collections. Accessed 2019-08-27. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=11608

Despite the failure of the Union Church, Pullman went ahead with his plan to rent the building to whichever congregation would like it. Histories of the church cite a $57,000 price tag, which could be verified in company records.[417] The high rent, of $300 for the church and $65 for the adjoining parsonage, however, drove away all the budding congregations until 1887 when a Presbyterian group rented it.[418] Richard Ely contended that they had been offering Pullman lower rent amounts and had

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[416] Mrs. Duane [Margarita Jane Richards] Doty, *The Town of Pullman: Its Growth with Brief Accounts of Its Industries [1893]*, Rev. ed. (Pullman, IL?: Pullman Civic Organization, 1974), 47.

[417] “Greenstone Church,” *Historic Pullman Foundation*, online accessed 26 August 2019 at http://www.pullmanil.org/greenstonechurch.htm; “Greenstone UMC History,” *Greenstone UMC Church Chicago*, online accessed 26 August 2019 at https://greenstoneunitedmethodistchurchchicago.wordpress.com/history/. A period account lists a lower price: $45,000 for the church and $3500 for the organ. "The Arcadian City of Pullman," 83–84.

[418] Stanley Buder contradicts the church history websites stating the Presbyterians started renting in 1885. Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 66.

been refused.[419] Other denominations rented spaces from the company, including a Methodist Episcopal group who used the second floor of the casino building until 1907 when they bought the Greenstone Church from the company out from under the Presbyterians. They continue to occupy it today.

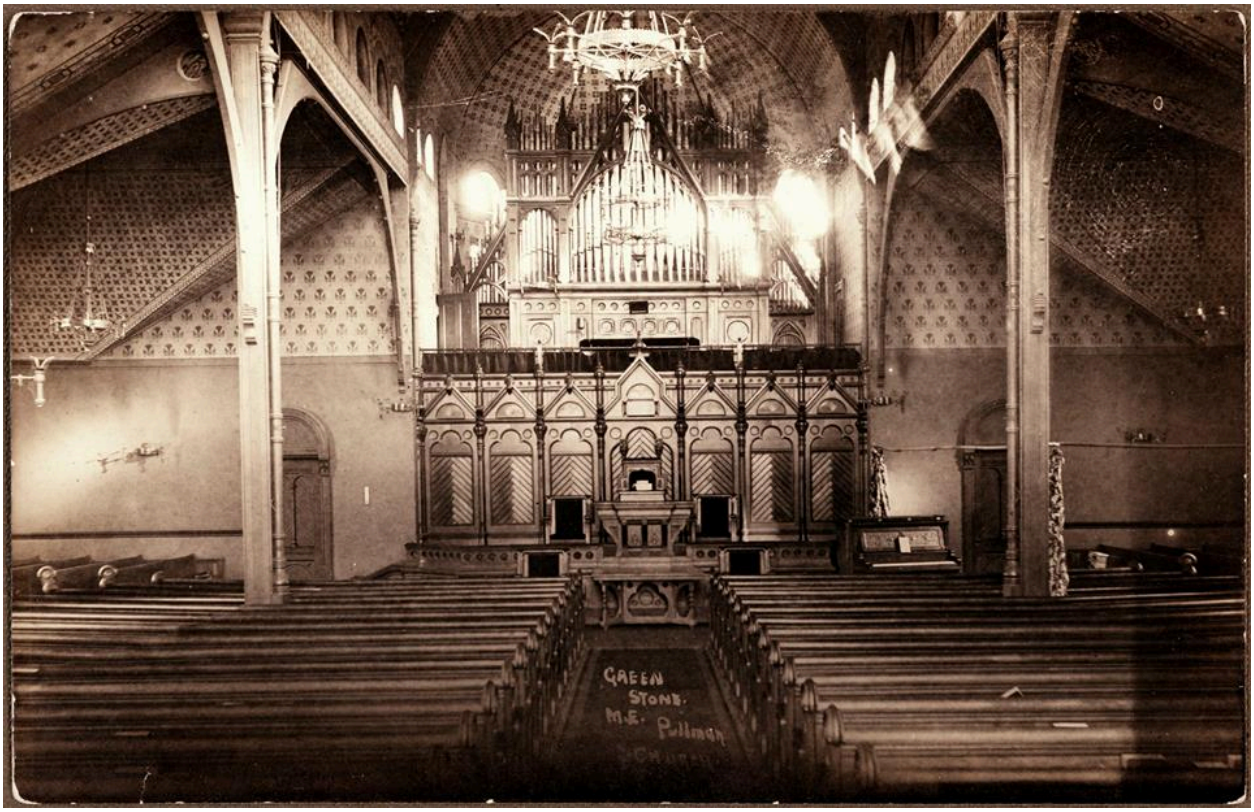

Figure 4.14. Interior of the Greenstone Church after 1907. The organ and altar remained largely unchanged. The Pullman State Historic Site. Collection: Pullman State Historic Site. Greenstone Church Interior" The Pullman State Historic Site Collections. Accessed 2019-08-30. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=14575

Pullman's approach to building just one church in his paternalistic town stands out as unusual. In Saltaire, for instance, Sir Titus gave land and financially supported at least two churches, Congregational and Methodist.[420] Likewise in Michigan's Copper Country, companies used the creation of church buildings as a way to both appease and control their employees. The companies recognized that familiar religious traditions in an employee's home language tended to create necessary support networks to maintain a consistent workforce. Supporting the establishment of successful churches seemed a worthy investment and starting as early as the 1860s companies repeatedly provided land for multiple denominations to build churches. At the height of population around 1920, the region had multiple churches for each major denomination to accommodate different languages and ethnic traditions.

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[419] Ely, "Pullman: A Social Study," 464.

[420] Towle, "Saltaire and Its Founder," 834-35.

Company officials, however, used the distribution to church property to create and maintain hierarchy amongst its employees. The ethnic and religious groups held in lowest esteem by company officials, including Finnish Lutherans, and Catholics from Slovenia, Croatia, and Italy, were given smaller lots farther from places of work and commerce.[421] In these ways, the Copper Country approach gave the company far more control over the religious landscape of its employees than Pullman's approach, which required almost everyone to leave the neighborhood to pursue religious practice elsewhere.

The architecture and the organ in the Greenstone Church at Pullman are significant. The name comes from the green mottled stone imported from Philadelphia, sometimes called serpentine stone at the time for its resemblance to reptilian scales, which is veneered on the main facades over a brick masonry structure. This stone, quarried since the eighteenth century, had enjoyed a resurgence in popularity in the Victorian period for its color and texture.[422] The choice to ship it Chicago requires more research but probably indicates a desire to stand out and add visual variety to the buildings surrounding Arcade Park, the centerpiece of town. The decorative interior and the organ retain much of their original character and details. The woodwork was in keeping with Aesthetic Movement tastes when paired with richly colored and patterned wallpapers and paint, which the *Agricultural Review* praised as being "carefully treated in soft color and artistic blending as were those of the theatre and library, the design being irregular and the color gradually lightening as it approaches the ceiling."[423] The organ, manufactured by Steere and Turner, a well-known Massachusetts organ company, dominates the altar. More research about how this firm was chosen, whether Pullman paid for it (reportedly $3,500), who installed it, and who some of the early organists were would illuminate the role of such an instrument in social negotiations between the company and residents.[424]

The Hotel Florence

In many ways, the Hotel Florence was among the most emblematic and innovative aspects of Pullman's town. He combined the railroad hotel, the burgeoning luxury hotel-apartment building, and the elite gentleman's club all in the name of elevating his company brand and leveraging his town for profit. As A. K. Sandoval-Strausz argued in his book *Hotel: An American History*, the Hotel Florence "contributed to practically all the functions of its parent company: not only transportation and maintenance but the production of railway carriages and the promotion of tourism as well."[425]

The building's architecture marked it as the stylistic centerpiece of town. Beman and Barrett designed it to resemble the houses and other community buildings, but its decorative detail and prominent location announced to visitors the very best that Pullman had to offer. Faced with pressed brick (the highest

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[421] Lankton, *Cradle to Grave: Life, Work, and Death at the Lake Superior Copper Mines*; Hoagland, *Mine Towns: Buildings for Workers in Michigan's Copper Country*.

[422] Jane Elizabeth Dorchester, "The Evolution of Serpentine Stone as a Building Material in Southeastern Pennsylvania: 1727-1931" (University of Pennsylvania, 2001).

[423] "The Arcadian City of Pullman," 83.

[424] Ibid., 84.

[425] Sandoval-Strausz, *Hotel: An American History*, 94.

quality used in town), the hotel boasted four stories with a complex combination of hipped roof, dormers, and two wide towers. Bold white limestone belt courses at each story tied the building visually to similar details on the surrounding houses and horizontal lines of the administration building. A deep and wide verandah stretched across two full facades announcing the hotel's hospitality.

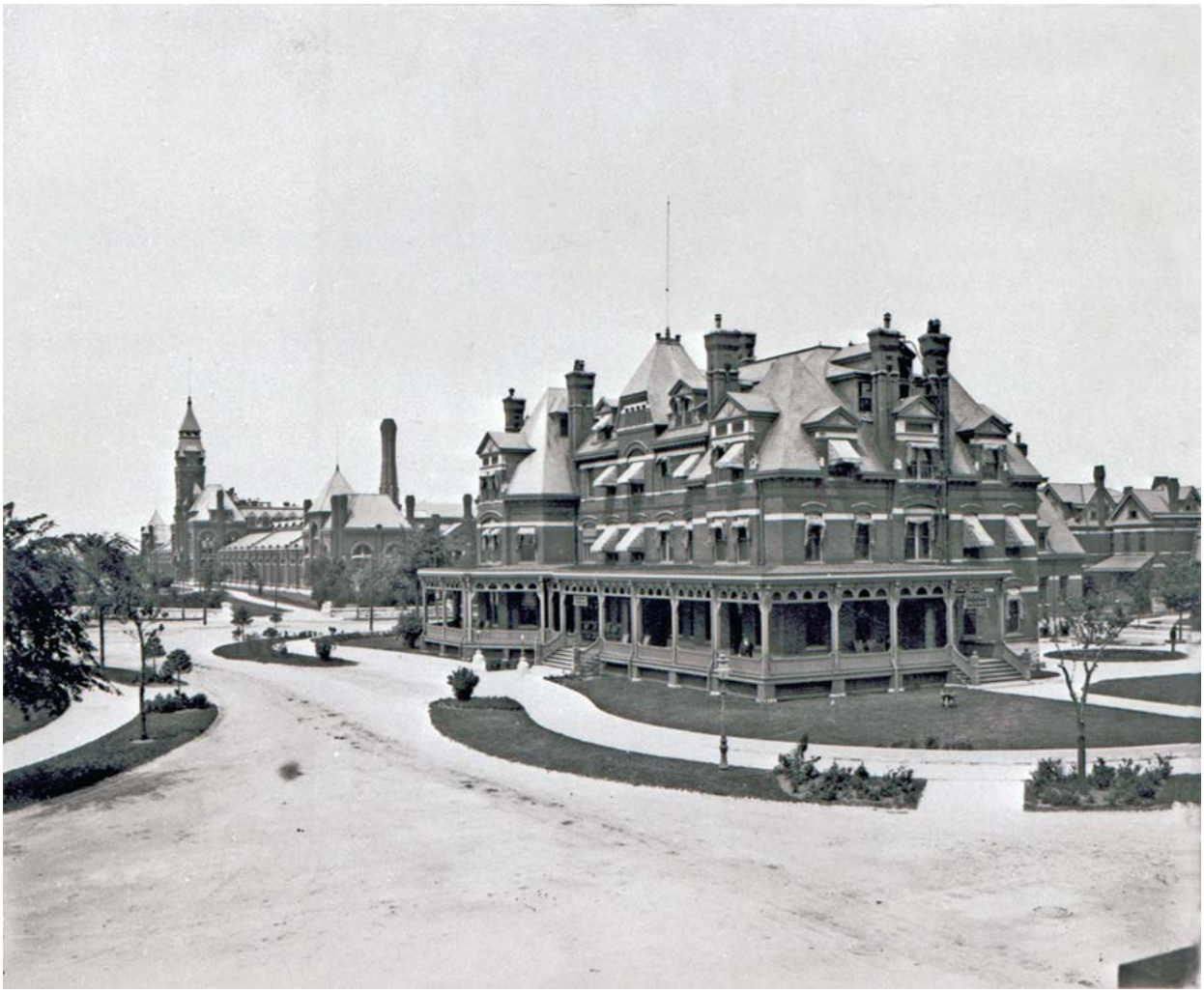

Figure 4.15. Hotel Florence looking northeast toward the administration building c. 1882. The Pullman State Historic Site. Collection: Industrial Heritage Archives - Pullman State Historic Site. Hotel Florence" The Pullman State Historic Site Collections. Accessed 2019-08-29. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=14343

The Hotel Florence included suites for visiting company executives, one large suite reserved for George Pullman's use, and fifty rooms for the tourists that Pullman expected to come see his new town. Mrs. Doty's description in 1892 suggested that "thousands" of visitors came to the town every year and that the hotel's dining room and guest rooms accommodated many of them. The hotel's advantages seemed to be its modern conveniences (telegraph, telephone, steam heat, and fire escape ladders) and accessibility for travelers, who could board a train only 300 feet away at the depot and ride either north

or south at all hours until midnight. In addition, the landscape's surroundings and views of Pullman's "best residences" were visible from the large porch and pleasant walkways.[426]

The Hotel Florence was the most elite place in town. Workers felt decidedly unwelcome there. Guest rooms cost $3 or $4 a night, a sum that equaled half a month's rent for most families. The fashionable architecture, interior fittings, and also the spectre of George Pullman's residence kept most working people away. Notably, the hotel featured the only bar in town. Pullman, like many reformers, regarded alcoholism as a major problem among workers and sought to control access to liquor. Outlawing private saloons but offering liquor in the building where workers felt most unwelcome sent a clear message: Pullman trusted the elite with alcohol as an aspect of bourgeois decorum but saw liquor in the hands of workers as immoral and dangerous. The double-standard could not have been clearer.

This hotel also replicated in static architecture the luxurious experience of riding in a Pullman Palace Car. The first-floor featured cherry woodwork with decorative carving and details not unlike those in his cars, and the china and silver featured the same PPCC branding. For business travelers who distinguished themselves on the rails in Pullman cars, staying at the hotel extended that status onto land. Importantly, the level and type of service at the Hotel Florence mimicked the Pullman Porter model. African American men worked as waiters and servers in the dining room, and African American women were maids. The hotel was the only place in the town of Pullman where African Americans worked or were regularly seen. This racial hierarchy in the hotel, which extended the experience of Palace Car passengers onto land, further served to embed the practice of being served by black people into the parameters of industrial-age luxury.

After the company sold off the town, the Hotel Florence operated for less than a decade before being converted into a boardinghouse. An Annex was added around 1915 whose three stories brought the total number of rooms available to 120. Workers rented these rooms, which included three meals a day at the restaurant.[427]

The Schools

Schools in paternalistic model towns usually played important conceptual roles, and Pullman's town, in this case, is no exception. Education figured prominently in Pullman's plan to develop a productive workforce. The only governing body in town allowed by Pullman was a school board.[428] The board members were elected by the citizens, the only element of town life for which citizens could vote. However, since any board member had to be a resident it meant they had to be a company employee, making school board independence impossible. Richard Ely reported in 1885 that all but one school board member was also an officer in one of the Pullman Company's entities.[429]

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[426] Doty, *The Town of Pullman: Its Growth with Brief Accounts of Its Industries*, 108–09.

[427] Historic Pullman Foundation., Fred Leavitt, and Nancy Miller, *Pullman, Portrait of a Landmark Community: A Photographic Essay* (Chicago: Historic Pullman Foundation, 1981), 13.

[428] Doty, *The Town of Pullman: Its Growth with Brief Accounts of Its Industries*, 144.

[429] Ely, "Pullman: A Social Study," 461.

In Pullman's era, providing education for working families was seen as a progressive and charitable aspect of paternalism. Saltaire contained schools for boys and girls as well as an infant day care and an art school. Sir Titus found that "intelligence far more than doubles the actual manual efficiency of an artisan."[430] Saltaire schools were free and followed the British government's curricula, which may have influenced Pullman's approach. In paternalistic towns in the United States, frontier extraction companies like those in Michigan's Copper Country usually provided schools with company-employed teachers for the first few years of a town's development until a municipal government was established and the population could support its own school. Often, however, the school board members remained prominent officials of the nearby companies blurring the lines between company and community.[431]

Pullman and Beman originally built one school in Pullman, but others followed. The first Pullman School stood at 113th Street and Pullman Avenue just south of the Casino facing the railroad tracks and was occupied in 1883. This brick masonry building was primarily a two-story block with hipped roof featuring three- and four-story projection and square tower breaking up the façade. The doors and many windows featured gothic arches decorated with stars and complex windows. Bold belt courses in contrasting light colored stone visually tied the building to the town's houses and related to the polychrome High Victorian Gothic styles of the period. Beman's design for the school closely resembles other gothic style buildings made popular for educational facilities over the previous decade, most notably Russell Sturgis' designs for Farnam Hall (1870) and Durfee Hall (1871) at Yale University, William Robert Ware's designs for Memorial Hall at Harvard (1870-77) and Thomas Webb Richards' College Hall at the University of Pennsylvania (1870–72), not incidentally constructed with green serpentine stone.[432] Sturgis served with Beman's mentor Richard Upjohn on the original board of the American Institute of Architects in the late 1860s and 1870s, during the years when Beman worked in Upjohn's office. The Upjohns themselves (Richard and his son Richard M. Upjohn) were pioneers of High Victorian Gothic and Beman would have been very familiar with the style since he worked with them on the Connecticut State Capitol (1875-78).[433]

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[430] Towle, "Saltaire and Its Founder," 834.

[431] Lankton, *Cradle to Grave: Life, Work, and Death at the Lake Superior Copper Mines*, 168-72.

[432] Marjorie Peterson, "The Writings of Russell Sturgis and Peter B. Wight: The Victorian Architect as Critic and Historian" (City University of New York, 1999).

[433] Thomas J. Schlereth, "Solon Spencer Beman, Pullman, and the European Influence on and Interest in His Chicago Architecture," in *Chicago Architecture, 1872–1922: Birth of a Metropolis*, ed. John Zukowsky (Munich: Prestel-Verlag, 1987), 174.

Figure 4.16. Pullman School. The Pullman State Historic Site. Collection: Pullman Virtual Museum. Pullman School" The Pullman State Historic Site Collections. Accessed 2019-08-28. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=11881

Pullman's vision for his schools may have been influenced by town manager Duane Doty, whose real expertise was as a school administrator. Curiously, however, he never appears listed among the school board's leaders, though Buder suggests that Doty helped Beman design the building.[434] The schools were the only amenity provided by the company offered to employees for free. Mrs. Doty's glowing account noted 1,000 students in 1892 and 24 teachers, which she happily claimed were part of the Chicago city system. She also touted the thousands of volumes in the Pullman library as an asset to the schools, but failed to mention the associated membership fee. [435] When the town of Pullman was annexed to the city of Chicago in 1889, the school came under city control. In 1896, two new wings were added to the school to expand capacity with eight new rooms. The Pullman State Historic Site features a

[434] Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 239 n.8.

[435] Doty, *The Town of Pullman: Its Growth with Brief Accounts of Its Industries*, 70.

useful history of the people involved in starting up and running the early Pullman schools.[436] Additional research could be done about how the Pullman schools operated in conjunction with Kensington and Roseland schools. Mrs. Doty noted schools having been built in those towns in 1892 and 1893 as an asset to Pullman in her account.[437]

Once under the Chicago school system, the schools were updated and expanded. In 1905, the Edgar Allen Poe School was built to serve the children living north of 108th Street and keep them from having to walk so far. This replaced the makeshift school operating in a townhouse visible in the 1892 Rascher Map. This building featured classical design of white stone façade with engaged pilasters, dentelated cornice, and dramatic keystone lintels. Interestingly, this may have been the first public building constructed in Pullman that faced away from the railroad tracks. Shortly after the company sold off the town in 1907, a new school building replaced the first Pullman School one block south and east at 113th Street and Forestville Avenue. Designed by Perkins and Will architects and named the George M. Pullman School, this second school building featured fireproof construction and more up to date classrooms, a gymnasium, and assembly hall. The new school was located one block in from the railroad tracks for safety. The original school building was torn down in 1913.[438] The histories of both of these schools, along with the Corliss School between 103rd and 104th Street (which started as an elementary school in the 1920s and is now a high school), figured prominently in the mid-twentieth-century debates about racial segregation and housing. Both schools continue to serve the community today.

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[436] "A 1900 History of the Pullman Schools," *Pullman State Historic Site*, online accessed 28 August 2019, http://www.pullman-museum.org/theTown/schools.html.

[437] Doty, *The Town of Pullman: Its Growth with Brief Accounts of Its Industries*, 70.

[438] Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 215.

Figure 4.17. Edgar Allen Poe School, c.1905, photo by H. R. Koopman. The Pullman State Historic Site. Collection: Petraitis Collection. Edgar Allen Poe School" The Pullman State Historic Site Collections. Accessed 2019-08-28. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=14877

Figure 4.18. Second Pullman School, c. 1910, Perkins & Will, architects. Collection of the Pullman State Historic Site, http://www.pullman-museum.org/main/pfp.11.01.08.21.jpg

It is worth noting that part of Pullman's long-term goals for education included a technical school that would train a new generation of American industrial workers. He left $1.2 million in his will for its creation, which led eventually to the Pullman Free School of Manual Training. Pullman's executors, however, struggled to start the school according to Pullman's vision with what turned out to be an adequate sum of money. They acquired a location to the west of the railroad tracks north of Palmer Park in 1908, and opened the school in 1914, a full fifteen years after Pullman's death.[439] Considerable material related to the family's struggle to establish the school could be studied in the papers of his son-in-law Frank O. Lowden, who was the executor of Pullman's will.[440] The family ran the school until 1950, when they decided to transform the school into a foundation that continues to award scholarships for Chicago students.

The Stables

The Stables accommodated horses both for the fire department and as a livery for officers and visitors. The building faced the Arcade and featured the red brick foundation with faux-medieval decorative shingles, cross-gables, and small-pane windows. The building featured three large carriage doors facing 112th Street. Inside, fire insurance maps suggest that there was a large space for carriages, stalls or

[439] Ibid., 210-11.

[440] Frank O. Lowden Papers, University of Chicago Archives.

horses, an office and washroom, with the second floor being hayloft. By 1892 a Wagon House extension had been built in the back toward the Casino, suggesting that the livery was getting a lot of use. In the 1911 Rauscher maps, the building is still listed as the Pullman Stables, but by 1938, fire insurance maps call it a Garage, indicating the transition in transportation technology. At that time, the garage featured a private section. The faceted tower on the building's west side still stood in 1938 but has since been lost.

Part of the Stables' significance is the centralization of animals away from individual houses. Workers in the US at this time often kept a cow in a small barn at the back of their lot, and also grew kitchen gardens to sustain their diets. Some paternalistic companies, including Calumet & Hecla Mining Company in Michigan's copper region, included small barns in their company-built housing.[441] In middle-class housing developments in the 1880s, restrictions on barns and stables were being written into land contracts and deeds as part of the massive separation, both physical and psychological, of the domestic and the industrial. Pullman's Stables, then, made it possible for the company's officers to keep horses and carriages for transportation and social purposes, and also for Pullman and Beman to argue that individual houses did not need yard spaces devoted to animals.

[441] Arnold Alanen, "'Gardens in the Backyard, Barns Along the Alley': Resident-Based Food Production in Mining Communities of the Lake Superior Region," in *Retrospection & Respect: The 1913-1914 Mining/Labor Strike Symposium of 2014* (Hancock, MI: Michigan Technological University, 2014).

Figure 4.19. Stables and Fire House. The Pullman State Historic Site. Collection: Pullman Virtual Museum. The Stables" The Pullman State Historic Site Collections. Accessed 2019-08-24. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=11575

The Casino

In the 1880s, the term "casino" was used by elite Americans for buildings constructed for athletic events and related socializing. Pullman's casino featured light and red brick, Victorian roof decoration, corbeled chimneys, and a Medieval styling communicated by large wooden doors with iron strap hinges, faux timber framing with decorative shingles, diamond-pane windows with lead came, and cantilevered window bays. Overall, Pullman's casino accommodated a number of organizations, town needs, and rental facilities over the years. Originally, it offered club rooms for the town's social organizations with repair shops on the first floor.[442] The 1886 Rascher Map lists its occupants as a laundry and stores on the first floor and a photo studio and the Methodist Episcopal church on the second floor. Records of the M.E. Church congregation petitioning the company for relief on their rent survive in the Pullman State Historic Site website from 1898 and 1900.[443] At this time, a wooden platform on the north side could have been for watching some sort of sporting event in the courtyard. If so, that use was short lived as by 1892 the new Rascher Map shows the casino connected to the stables by a wooden Wagon House that compromised any outdoor play space. By that time, the Casino also included an undertaker.[444] Around 1895, after the strike, much of the building was taken over by the Men's Society of Pullman, a membership club made up of Pullman's prominent men, including George Pullman, and business associates from St. Louis and New York who presumably used the casino while visiting the factory. The group completed renovations to make the first floor into a large gymnasium, managed by the Society, accommodating basketball, handball, fencing, boxing, and weightlifting. Non-alcoholic beverages were available. Membership was open to any Pullman male who paid a $3 membership fee but according to historian Wilma Pesavento, membership included the elite and none of the known athletes in town.[445]

By 1911, the casino building had been converted into a steam laundry, and was used for that purpose until at least 1938, as indicated on maps. The building may have survived with an additional façade along Cottage Grove Avenue at least until 1959 when its footprint appears in aerial photographs.

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[442] Wilma J. Pesavento, "Sport and Recreation in the Pullman Experiment, 1880-1900," *Journal of Sport History* 9, no. 2 (1982): 47.

[443] Letters from Methodist Episcopal Church, Pullman State Historic Site. Online, accessed 23 August 2019, http://www.pullman-museum.org/pshs/pshsCompoundObjectWebPage.php?collection=pshs&pointer=19885.

[444] Doty, *The Town of Pullman: Its Growth with Brief Accounts of Its Industries*, 33. Pullman State Historic Site website searches for "Casino" include these details. Online, accessed 23 August 2019, http://www.pullman-museum.org/pshs/pshsBySubject.php?subject=Casino_Building.

[445] Pesavento, "Sport and Recreation in the Pullman Experiment, 1880-1900," 47-48.

Figure 4.20. Casino, 1880s. The Pullman State Historic Site. Collection: Industrial Heritage Archives - Pullman State Historic Site. The Casino" The Pullman State Historic Site Collections. Accessed 2019-08-27. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=14555

The Hospital

A seemingly curious omission from the Town of Pullman's original conception was a hospital. Medical treatment offered by companies was and continued after Pullman to be among the primary offerings of paternalistic and corporate welfare systems. Mrs. Doty in 1892 acknowledged a potential need. "A hospital is among the institutions of a not remote future, and the question has already had much attention."[446] As she noted, residents could get to city hospitals in a half an hour. Saltaire and other European precedents did provide company-sponsored hospitals for employees. Others in the US did as well, though often these were in extractive industries lacking big city medical facilities. Indeed, Almont Lindsey in 1939 suggested that Pullman's lack of medical facilities (as well as a cemetery, orphanage,

[446] Doty, *The Town of Pullman: Its Growth with Brief Accounts of Its Industries*, 108.

and jail) was due to their availability in the surrounding area.[447] Others suggest that Pullman recognized that a hospital would not be profitable.[448]

In the beginning, Pullman employed a doctor who performed emergency surgeries in the front two rooms of his house. Transportation to a Chicago hospital followed. In the government study after the strike of 1894, the US Strike Commission demonstrated that the company's medical offerings did more to protect the company from liability than keep workers safe. By 1910, Hull House publicized the "primitive simplicity" of medical treatment at Pullman and mounted a campaign for change.[449] By 1912, the company had established the Pullman Hospital Association with a board of directors, including Thomas Dunbar.

The new Pullman Hospital occupied 11217 Watt Avenue (now 11213 St. Lawrence Ave) in a converted townhouse immediately south of the Greenstone Church. A rear extension created more space and the original Pullman porch was replaced by a grand wrap around version.

Figure 4.21. Pullman Hospital, not dated. Pullman State Historic Site The Pullman State Historic Site. Collection: Pullman Virtual Museum. 11217 Watt Avenue " The Pullman State Historic Site Collections. Accessed 2019-08-24. http://www.pullmanmuseum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=11921

[447] Lindsey, "Paternalism and the Pullman Strike," 275.

[448] William Adelman, *Touring Pullman: A Study in Company Paternalism*, 2nd ed. (Chicago: Cornelius Printing Co., 1977; repr., 2nd Edition 1977).

[449] Ibid., 12-14.

4.E.2 Pullman Houses

In general, the domestic units that were designed for employees in the new Town of Pullman were mostly connected row houses and duplexes, with some single-family houses on the high end and tenement units on the low end. Most units had three to five rooms, a kitchen, yard, shed, sink with running water, and a water closet (sometimes shared). A valuable resource for understanding the architecture and amenities of Pullman's housing units is the 1895 *Eighth Special Report of the Commissioner of Labor*, which surveyed housing for workers in the United States and Europe.[450] The report, written largely by sociologist E. R. L. Gould, identified two types of housing at Pullman: tenements and single houses. The word tenement at this time referred to any kind of apartment in a shared building. Some tenements were built in three-story brick buildings later called block houses. The report described one block house on Fulton Street, designated Type A, which seems to match the current building at 11127 S. Langley Street (renamed from Fulton).[451]

This three-story brick structure offered 12 apartments with either three or four rooms. Each apartment had access to a water-closet (some were private, some shared) with the Durham ventilation and Jennings hopper-closet systems installed. Each unit also had a pantry with sink and running water, a cook stove (either "ordinary" or gas) and the option of using gas for lighting (if tenants chose to pay for it). Garbage went in barrels in the rear where a shed offered fuel wood and coal storage. The report concentrated on issues important to housing reformers such as the fact that each room opened out to the air either by a window or door, and the fact that no fire escape route existed other than the central interior staircase. Rents ranged from $8–$9 per month. The higher rents got you more rooms and a convenient first floor unit.[452]

This tenement description matches very closely several surviving drawings by S. S. Beman and his staff of tenements or flats in various parts of town. No drawings of the block houses were located for this study.[453] Drawings of flats and cottages in Blocks 6, 7, and 16, however, have floor plans and amenities similar to those tenements described by the Report.[454]

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[450] E. R. L. Gould, "Eighth Special Report of the Commissioner of Labor: The Housing of the Working People," ed. United States Department of Labor (Washington, DC: U. S. Government Printing Office, 1895); Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 86-91.

[451] At least one of these buildings still stands but is unoccupied.

[452] Gould, "Eighth Special Report of the Commissioner of Labor," 330–331.

[453] More of Beman's drawings probably survive either in the Art Institute's Architecture and Design collection or in the Historic Pullman Collection. See Note 42.

[454] 212 architectural drawings by S. S. Beman and his office can be viewed at the Burnham and Ryerson Art Library at the Art Institute of Chicago. The roll also contains 29 pages from Gustaf H. Carlson, *Atlas of the Town of Pullman* (1902). Originals of these drawings probably survive uncatalogued in the Art Institute's Architecture and Design Collection, which was not made available for this study. Microfilm Roll Number 39, The Town of Pullman, Illinois.

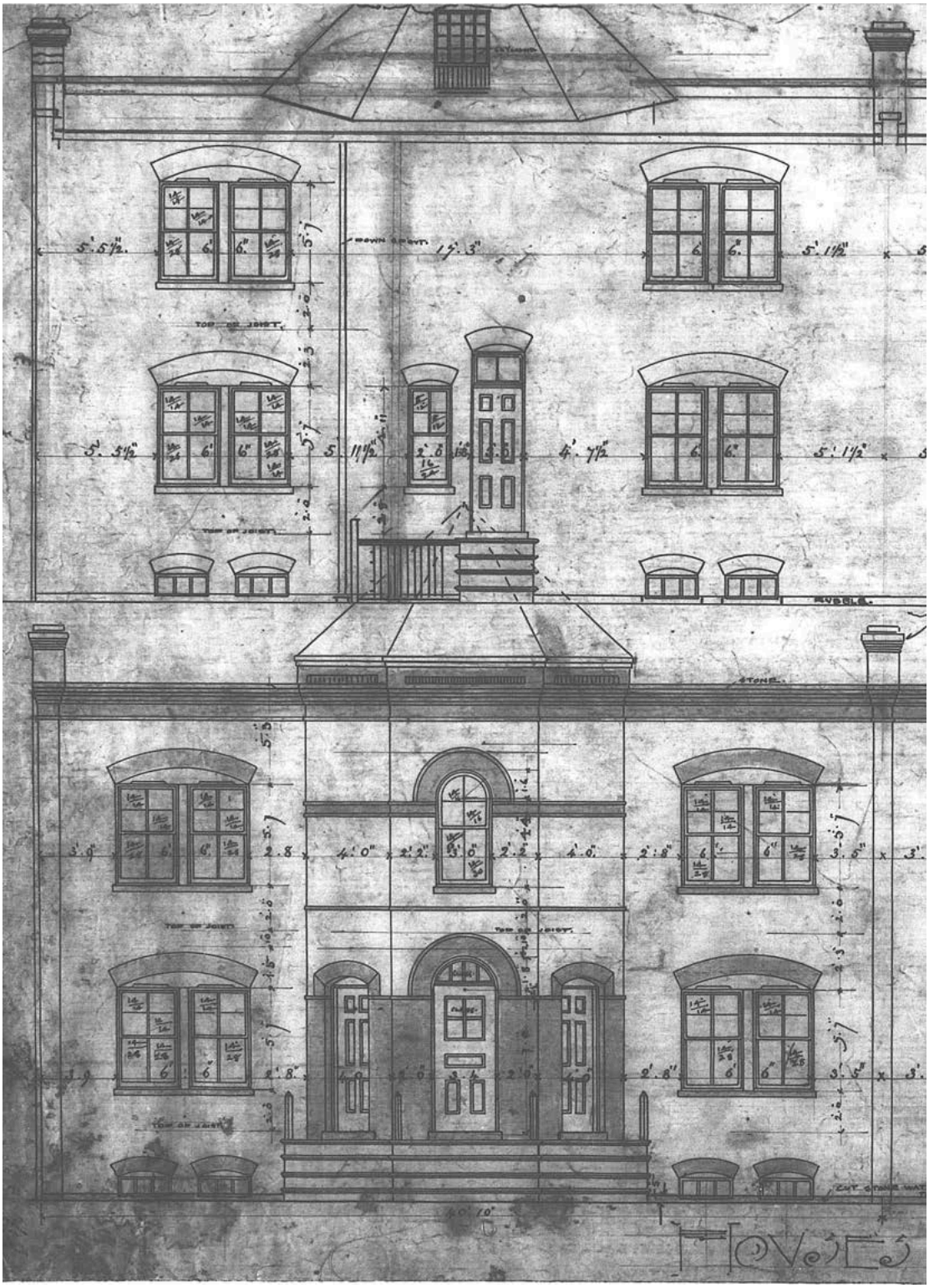

Figure 4.22. Detail of elevations of the front (bottom) and rear (top) of flats in block 16. S. S. Beman, "Houses at Pullman, PPCo," frame #104, Microfilm Roll 39, Burnham and Ryerson Library, Art Institute of Chicago.

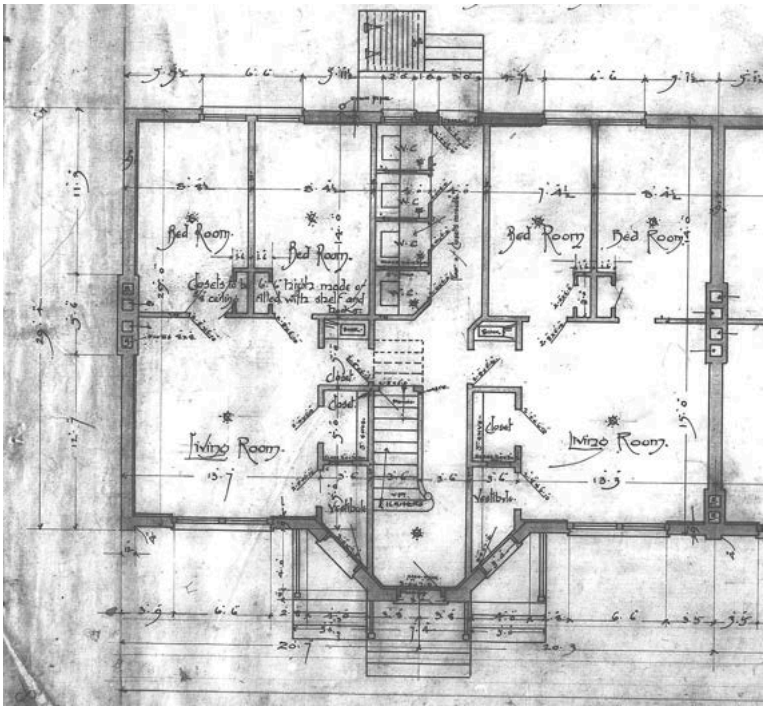

Figure 4.23. Detail of First Floor plans of 3-room flats in Block 16. S. S. Beman, "Houses at Pullman, PPCo," frame #102, Microfilm Roll 39, Burnham and Ryerson Library, Art Institute of Chicago.

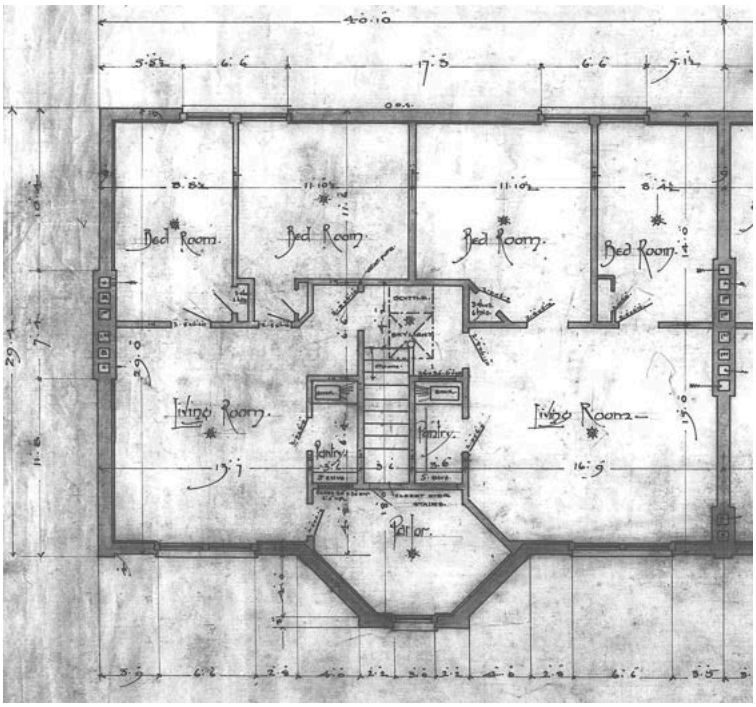

Figure 4.24. Detail of Second Floor plans showing a 3-room flat (right) and a 4-room flat (left) in Block 16. S. S. Beman, "Houses at Pullman, PPCo," frame #103, Microfilm Roll 39, Burnham and Ryerson Library, Art Institute of Chicago.

These buildings featured a front door that led to a central stair hall, which afforded access to the second-floor units as well as the four shared water closets in the back hall. Two first-floor units, which were mirror images of one another on either side of the stair hall, had their own individual doors flanking the main door. These entered into a tiny vestibule that in turn entered into the living room. This room had a closet, the flue for a stove, and doors to two small bedrooms. A small room with a sink connected the living room to the central hall.

The second-floor units were a little larger. The three room unit featured a living room with pantry and sink, and two bedrooms, one of which was larger than the small bedrooms in the downstairs units. The four room unit had a similar configuration but also featured a small hexagonal parlor over the front door. While the second floor afforded more space, it requires residents to traipse up a flight of stairs to get home, and also to go back down to the use the water closet. Drawings show several alternate room arrangements in the same space with similar tradeoffs.

None of the drawings for the three and four room flats designate a kitchen. The fact that the four room unit had a living room and a parlor but no kitchen emphasizes the middle-class mindset that Beman and Pullman brought to designing spaces for working people. A parlor and living room had become vital elements of the ideal American home by the 1880s, which designers and consumers associated with high moral standards, family togetherness, and polite social interaction. In all likelihood, tenants used the living room as an all-purpose room for cooking, eating, and piecework for side jobs like sewing and laundry. In fact, the *Special Report* described the living room in the four room unit as a kitchen, suggesting the way people actually ended up using it. The small parlor in the four room unit would have made a convenient extra bedroom for family or boarders. Cellars in these buildings, whose uses are not noted in the report or in the drawings, may have offered alternate places for cooking.

Indeed, worker families across the US at this time generally preferred housing that provided spaces to help them get ahead. In countless other towns, working families rented rooms or took in boarders or used available space for piecework, as mentioned above. Women took in laundry or sewing. They cooked extra meals for boarders. The spaces of the Pullman flats could have facilitated those activities, but other factors—especially company inspections—might have discouraged this common practice. If inspectors enforced rules about cleanliness, they likely would have reported extra beds in the living room, a washtub in the parlor, or a workshop in the backyard. An archaeological report by Dr. Jane Eva Baxter at DePaul University further supports the idea that renters in Pullman were not able to leverage these company houses as was common elsewhere. Baxter found very little sign of common working-class activities in the Pullman yards until after the company sold the houses.[455] For many families in the company period, then, this inability to leverage their living space for more income probably frustrated them as much if not more than the more abstract sense of surveillance often cited as a main cause of labor dissatisfaction.

Living in these flats may have seemed a step up from the block houses for some families. These buildings offered the same sized living spaces and amenities, but they appeared from the outside more like single-

[455] Jane Eva Baxter and Andrew H. Bullen, "'The World's Most Perfect Town' Reconsidered: Negotiating Class, Labour and Heritage in the Pullman Community of Chicago," in *Heritage, Labour, and Working Classes*, ed. Laurajane Smith, Paul Shackel, and Gary Campbell (London: Routledge, 2011).

family houses. The block houses, by contrast, looked more like tenement buildings being built in Chicago and other cities for industrial workers. Even by 1881 these tenements were being blamed for disease and discomfort. Moreover, the ideal of a single-family house resonated with many working families looking for economic and social success in the US. For this reason, a unit in a rowhouse may have seemed better than a unit in a large block. Similar floor plans for three and four room flats survive in Beman's drawings for Block 7.[456]

The 1895 report, after describing the flats, also describes single houses. These two and three-story single-family houses offered more space, more polite entertaining rooms, and more private amenities. In short, these were middle-class houses. Gould is not specific about the location of the house he described for his report. His details, however, match quite closely Beman's drawings for Block R. Block R, however, does not appear in maps and may have been a designation used in the design phase that Pullman renamed later. More research is needed to match up drawings, descriptions, company records, and extant architecture. Until then, the drawings for Block R paired with the 1895 single house description provide a useful housing type to compare with the three and four room flats.

Single houses in the report had five rooms: a parlor, kitchen, and three bedrooms, all of which were larger than in the flats. Ceilings, which had not been described for the flats, were 10 or 10.5 feet high. Many amenities mirrored the flats, such as the water closet ventilation systems and the garbage system, but qualifications made the hierarchy obvious. The single houses all had the water closet "inside the house," running water on both floors, as well as a shed in the back for convenient fuel storage (Figure. 4.32). They also offered seven gas jets, three corresponding chandeliers, and both a pantry and a china closet. Several nods also appeared to fashionable decoration: the woodwork was painted, walls were papered, and the ceiling was calcimined. Rent, according to Gould in 1895, was $18 per month, or about $10 more than the flats. He reported that this level took 33% of a worker's wages, a higher percentage than for the flats.

[456] Frames #90–94, Reel 39, Art Institute. Frame #69 also has 3 and 4-room flats labeled "Class U," in single-story houses.

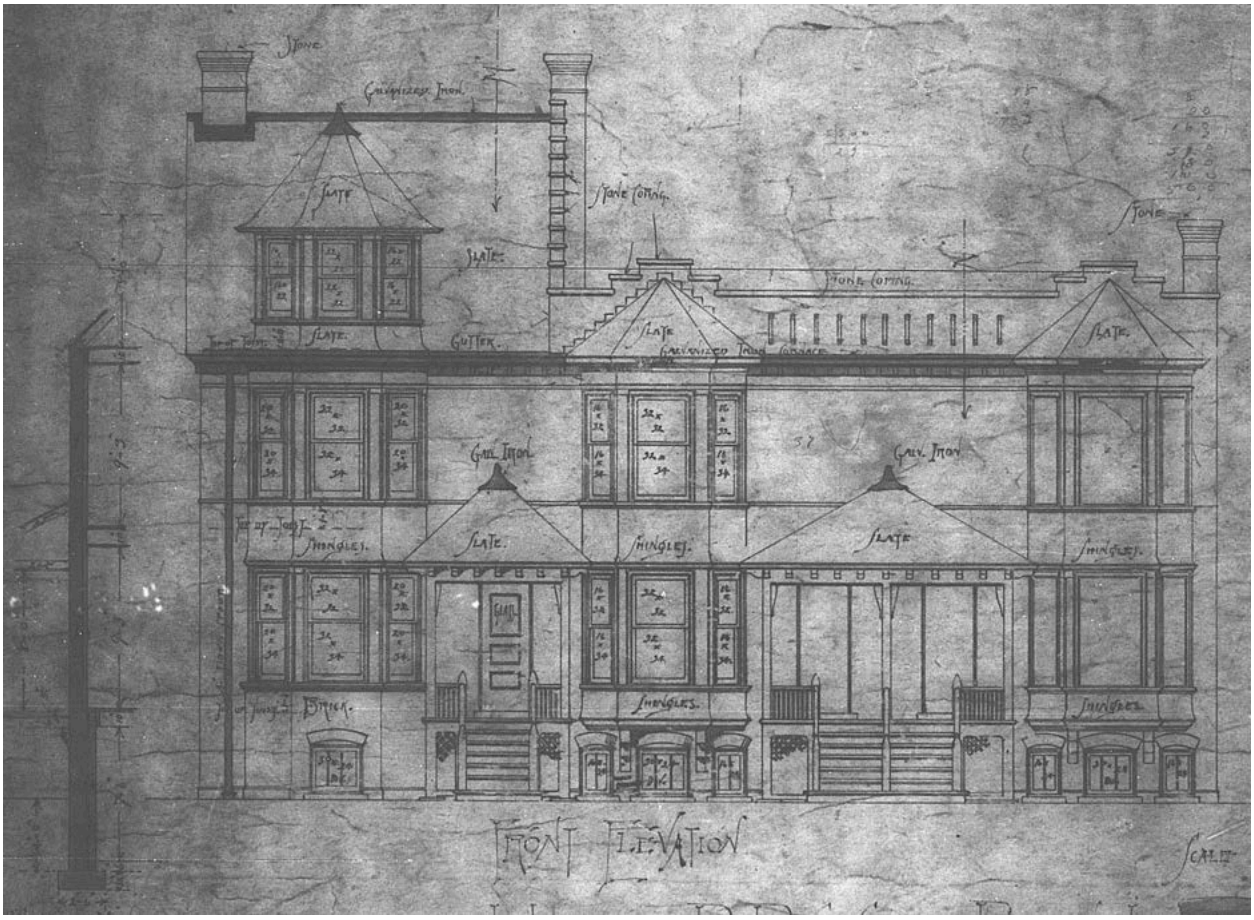

Figure 4.25. Detail of front elevation of three- and two-story single-family houses drawn for Block R. S. S. Beman, "Houses at Pullman, PPCo," frame #74, Microfilm Roll 39, Burnham and Ryerson Library, Art Institute of Chicago.

Table 4.1. Comparison of amenities and costs for 3-room and 4-room flats, and 2-story single house as described in Gould's 1895 Special Report of the Commissioner of Labor. The flats described were in the 3-story "Block Houses" but the amenities were similar in flats in row houses.

Amenity	3-Room Flat	4-Room Flat	2-Story Single House
Kitchen		15 x 13	14 x 16
Living Room	15 x 13		
Bedroom	15 x 7.5	12.3 x 8	12 x 16
Bedroom	12 x 7.5	9 x 9.5	7 x 8
Bedroom			7 x 8
Parlor		15 x 7.5	
Pantry w/ sink	Yes	7.5 x 3 or a little larger	Yes
Water closet	Separate closet for each toilet. WCs often shared between units. Jennings hopper-closet system for ventilation		One per family. Jennings hopper-closet system for ventilation
Heating	"ordinary stoves" in each unit		*Not specified*
Gas	laid to every room, using it for lighting is optional. Tenants pay for gas		Seven gas jets and three chandeliers. Tenants pay for gas
Garbage	barrels in the rear		
Cooking	Cook stove, wood or gas		"ordinary cooking range"
Air	Every room has window or door to the outside. Durham system of ventilation.		*Not specified*
Water	Running water in every unit. Tenants pay for water		Running on both floors. Tenants pay for water
Ceiling height			10 or 10.5 feet
Cupboard			2 cupboards (called "china closet" in drawings)
Decoration			Window shutters outside. Inside, woodwork is painted, walls are papered, ceiling is calcimined
Rent	$8.00/mo $8.50 for first floor	$9.00/mo	$18.00/mo

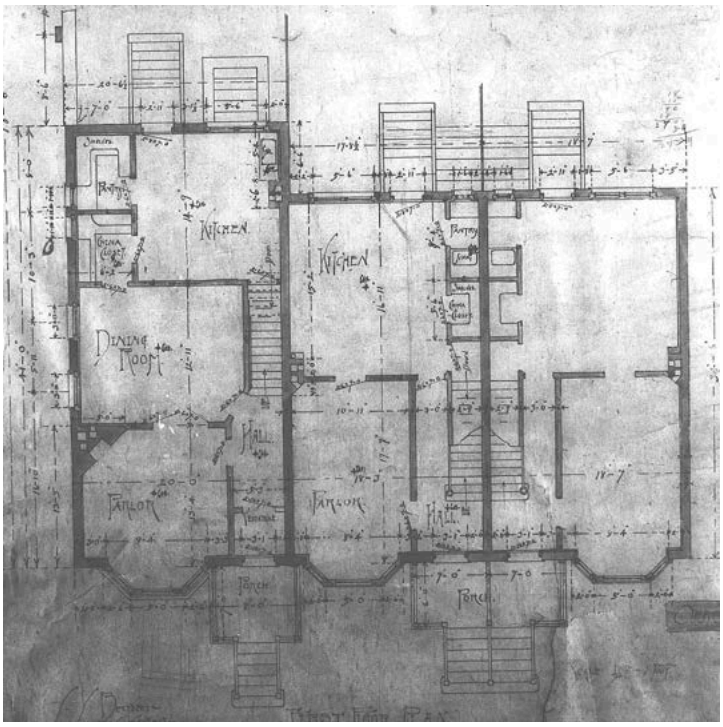

Figure 4.26. Detail of First Floor plans for three-story (left) and two-story (right) single-family houses in Block R. S. S. Beman, "Houses at Pullman, PPCo," frame #71, Microfilm Roll 39, Burnham and Ryerson Library, Art Institute of Chicago.

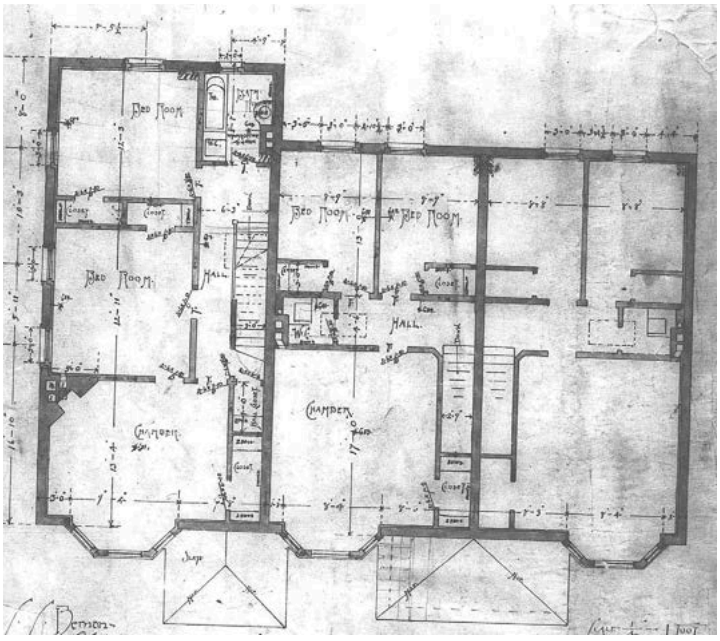

Figure 4.27. Detail of Second Floor plans for three-story (left) and two-story (right) single-family in Block R. S. S. Beman, "Houses at Pullman, PPCo," frame #72, Microfilm Roll 39, Burnham and Ryerson Library, Art Institute of Chicago.

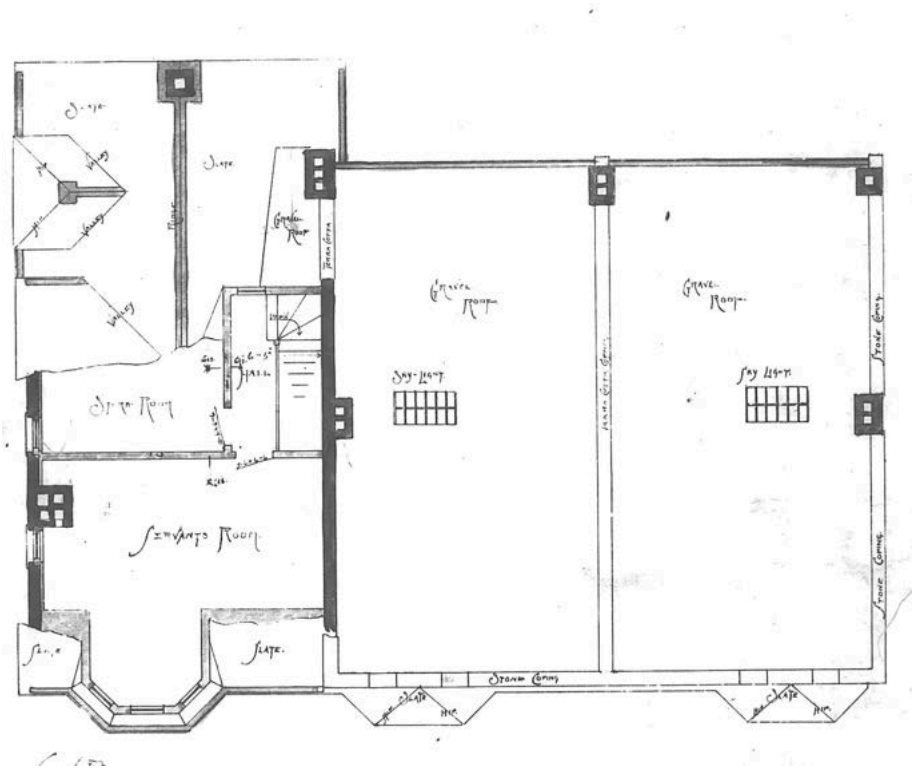

Figure 4.28. Detail of Third Floor plans (including Servants Room) and rooftop for three-story (left) and two-story (right) single-family in Block R. S. S. Beman, "Houses at Pullman, PPCo," frame #73, Microfilm Roll 39, Burnham and Ryerson Library, Art Institute of Chicago.

Beman's drawings for Block R offer further evidence of the middle-class spaces and amenities that helped create hierarchy in housing. The most common plan in Block R featured a stair hall, parlor, and kitchen on the first floor. The family could control how much of the kitchen and workspace a visitor could see upon entering. The parlor featured a bay window in front, and a canted corner chimney to show off a decorative heating stove, which in this period often featured fashionable ornament and could be considered a centerpiece of the room. Upstairs a hall, well-lit by a skylight, gave access to three bedrooms, one very large in the front. A water closet here was shared by the family. Each bedroom had its own storage closet.

Beman's drawings also feature a larger single house in Block R called a Corner House in one drawing.[457] This one occupied the end of the row, extended about four feet extra in the rear, and had a third floor. It featured all the amenities of the smaller single house with several additions that offered more comfort, control of space, and most importantly, a space for a live-in servant. It had a dining room on the first floor, which not only offered a formal eating space, but also buffered the kitchen from the more public spaces. A walk-through china closet, which was larger than in the smaller single house, led from the dining room to the kitchen and offered the only access to the cooking area from the front of the house. The parlor in this house featured a corner fireplace, probably decorated, which could have accommodated a stove or coal grate for heating. In the kitchen, the sink stood on its own in the room

[457] See Frame 79, Reel 39.

instead of tucked in the pantry, offering a more convenient space for food preparation and cleaning. Upstairs, this larger single house offered larger bedrooms and also a three-piece bathroom with bathtub, sink, and water closet.

The third story featured a servant's room. In the 1880s, live-in servants were common for middle-class families. Many of the new proto-suburban houses filling up industrial cities and towns not only removed the family from the industrial workplace as part of the so-called "cult of domesticity," but they also divided up class-specific spaces of housework. The kitchen, backstairs, basement laundry area, and yard became workspaces where the wife managed domestic workers in the home much like her husband was supposed to manage industrial workers in the office or factory.[458]

Like these, this larger single house in Pullman offered spaces for separating work from leisure in the middle-class home. The kitchen had direct access to the rear yard, shed, and basement food storage, allowing the parlor and dining room to face the street with access mainly afforded through the decorative front door and porch. The walk-through china cabinet offered further buffer for guests and family in the dining room from the smells, sounds, and sites of cooking, which at this time would have included more animal and garden waste than in today's kitchens. The china cabinet also showed off the family's accoutrements of entertaining in middle-class taste. The design of the cabinets and shelves for these china cabinets were so important that Beman provided drawings (Figure 4.30).

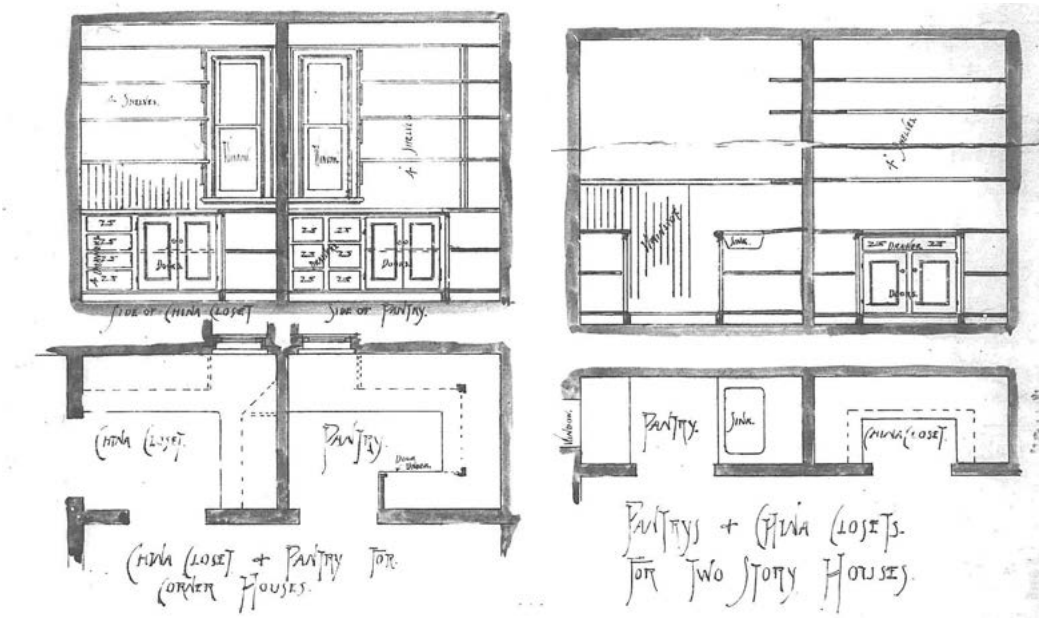

Figure 4.29. Elevations and plans for china closets and pantries in the 3-story or "Corner House" (left) and the two-story (right) in Block R. S. S. Beman, "Houses at Pullman, PPCo," frame #79, Microfilm Roll 39, Burnham and Ryerson Library, Art Institute of Chicago.

[458] Daniel E Sutherland, *Americans and Their Servants: Domestic Service in the United States from 1800 to 1920* (Baton Rouge, LA: Louisiana State University Press, 1981); David M Katzman, *Seven Days a Week: Women and Domestic Service in Industrializing America* (New York, NY: Oxford University Press, 1978).

Interestingly, the Pullman of the middle-class house lacked some features common in similar homes elsewhere. No back stair existed in this plan, meaning that the servant could not access her bedroom without sharing the front stairs with family and guests. Likewise, many houses featured a basement toilet, often reserved for the domestic worker. The drawings show no basement toilet, meaning the cook or servant had to share the three-piece bathroom with the family at all times. Examining extant examples of these house types could shed important light on how nineteenth-century Pullman residents handled what would have been an architectural and cultural dilemma.

Other types of housing in Pullman extended the hierarchy of housing at both ends of the spectrum. Houses even larger than the end-of-the-row single house existed on 111th Street facing the factory. Likewise, even smaller frame tenements with more rudimentary amenities housed workers on the perimeter of Pullman. An 1885 publication indicates that Pullman intended to stratify the population further by encouraging the town's wealthiest—described with true nineteenth-century bias as "the right class of people"—to move out and build their own independent properties on a hill. This "beautiful suburban village" does not seem to have been created but the plan for successful businessmen to separate themselves collectively on higher topography in fashionable single-family houses that they owned outright is fully in keeping with trends among industrial companies.[459] Further research to uncover the nuances of architectural and policy differences, as well as residents' responses to it, could add important factors to interpretations of life for workers in Pullman.

[459] "The Arcadian City of Pullman," 86. For more on this trend to suburbanize industrial company towns see Sarah Fayen Scarlett, "Everyone's an Outsider: Architecture, Landscape, and Class in Michigan's Copper Country" (University of Wisconsin, 2014).

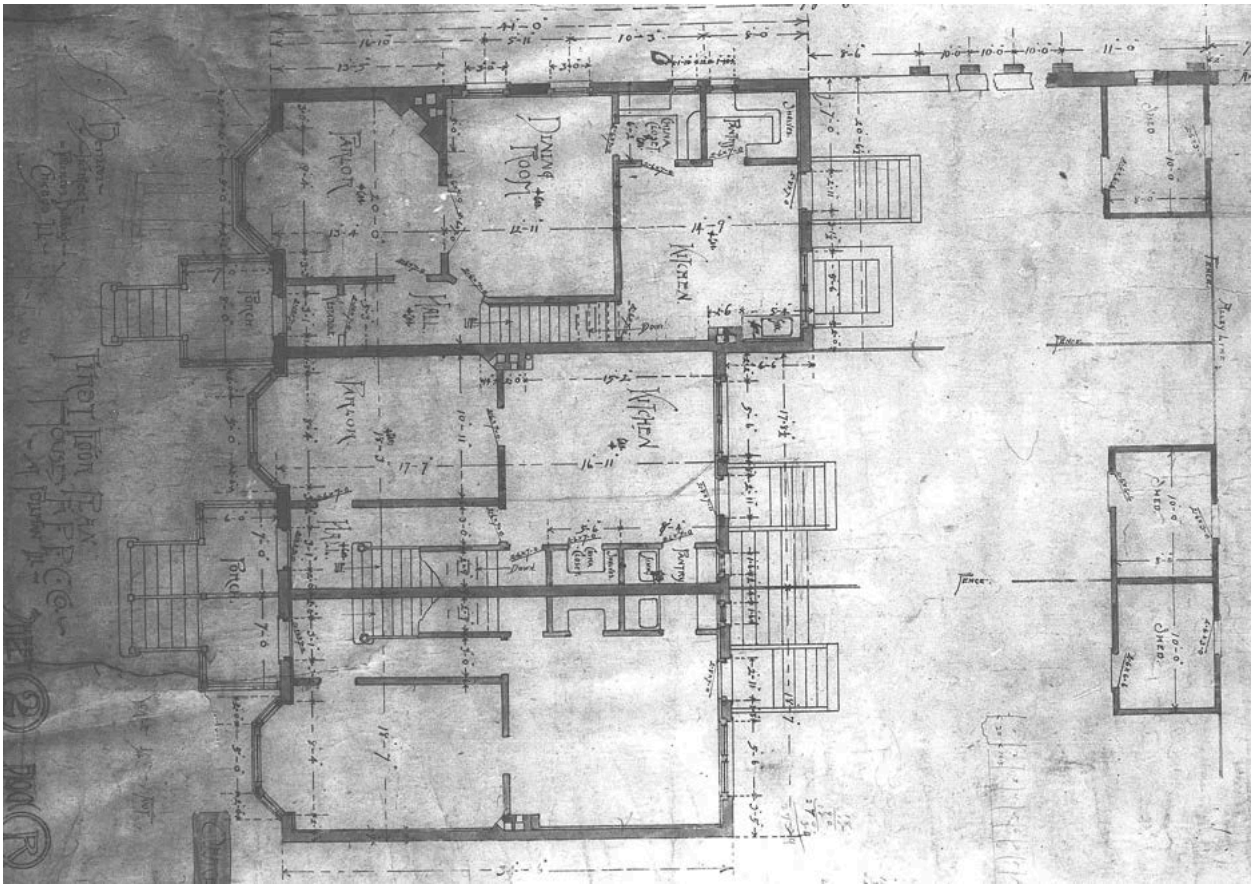

Figure 4.30. Note the sheds at the rear of each lot. Detail of First Floor plans and site plan Block R. S. S. Beman, "Houses at Pullman, PPCo," frame #71, Microfilm Roll 39, Burnham and Ryerson Library, Art Institute of Chicago.

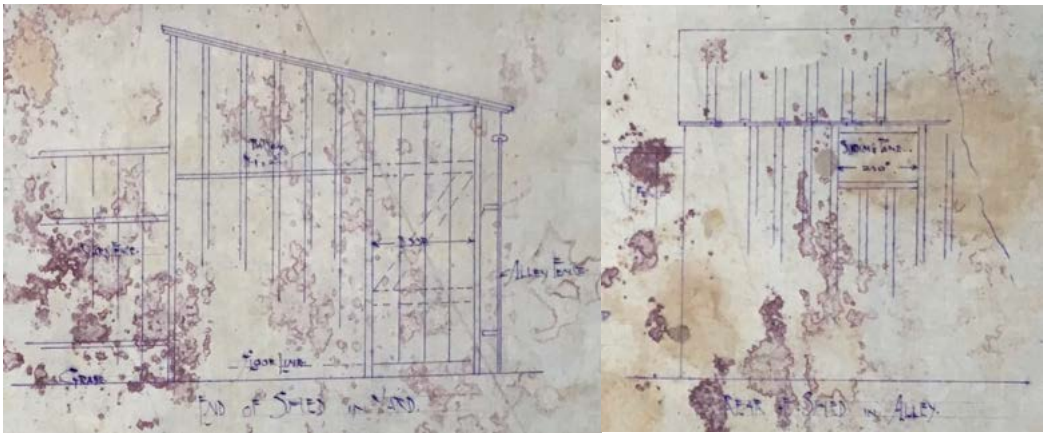

Figure 4.31. Details of construction drawings for sheds in Block R. S. S. Beman, "Houses at Pullman, PPCo," frame #48, Microfilm Roll 39, Burnham and Ryerson Library, Art Institute of Chicago.

4.E.3 Construction and Moving In

Design and construction of Pullman proceeded very quickly and strategically. The efficiencies taken to build at such scale make the construction of Pullman a ground-breaking moment in the development of architectural mass-production. The speed with which a fully integrated town appeared on the seemingly-empty prairies attracted considerable attention from the media and Chicagoans themselves.

Pullman wanted the factory to begin operation by spring 1881, so surveying for the shops and town began in April 1880. Pullman wanted the construction to show off to critics the best parts of the town first.[460] Accordingly, the Allen Paper Wheel factory and industrial shops received first attention, being ready to receive engines and machinery by October 1880 and ready for production in March 1881. The first non-industrial building constructed was the Hotel Florence, begun in the fall and completed in September 1881. November 1880 saw the first work beginning on the houses. The first resident to move in arrived in January 1881, a foreman whose type of managers' house had been prioritized over workers' housing in part to demonstrate the designs to the media. By November 1881, the town housed over 1,700 people and the factories were up and running. The speed of the town's appearance led Henry Demarest Lloyd to write in *Harper's Weekly* "The town is advertising itself and everything connected with it. Its short but remarkable history is becoming a household word. It is famous though not yet finished."[461]

[460] Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 51-52.

[461] As cited in Buder, Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930, 55.

Figure 4.32. "Fulton Street, Looking North," undated, photograph 1.49. Historic Pullman Collection, Chicago Public Library.

To achieve this incredibly fast construction, the company poured resources into the building effort and hired an enormous number of people. Every week in the summer and fall of 1880, over 100 freight cars unloaded building supplies at the site, and the number of cars grew in the following year. It built temporary quarters for the architect's staff and construction workers, as well as a mess hall to feed them. The company hired over 2,000 men and kept a special "Construction Accounts" ledger.[462] In that ledger, Pullman's accountants broke down the construction workers on payroll into categories: carpenters; tinners (who worked on roofing and gutters); masons; painters; engineers; and professional staff working under Beman. After 1882 they kept a separate category for draughtsmen working under Irving K. Pond, a draughtsman for Beman who wrote a remembrance of building the Town of Pullman in 1934, which remains among the best resources for understanding the construction process.

The ledgers recording these categorized payrolls do not name individual workers, but they do provide great insight into the company's building activities. The most expensive group of workmen was the carpenters, probably due to the sheer number of men needed to frame up the houses. The exact wages paid the workmen are unclear. Stanley Buder, in his classic history of Pullman, wrote that the workers were paid at graduated rates, with unskilled laborers receiving $1 per day and skilled workers, such as masons and carpenters, receiving between $2.50 and $3.50 per day. These wages seem somewhat low.[463] Other records suggest that wages for unskilled workers even during the 1879 depression were $9 per week (or $1.50 per day).[464] It is possible that the wages Buder cited included room and/or board on site. Irving Pond's generally glowing remembrance of the construction period claimed wages and salaries were "as high as on similar work in the Chicago area."[465] More research in the company records could offer better comparisons about how workers were paid. For example, the payroll expenses could

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[462] Construction Accounts, Monthly, 1882–1886, Town of Pullman Records, Manufacturing Department, Pullman Company Records, Newberry Library, 07/00/04/box 1/vol 1. A note in the front of this volume notes that the construction records for 1880–1882 were kept in a "Supplement to Journal 'A'" under the title "Construction of Chicago Works," before the Town of Pullman had a name. This journal exists in an unknown subseries.

[463] Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 53. Buder does not specify the source of those wage numbers. His University of Chicago dissertation, upon which the book was based, may contain more specifics. Further research in the company records at the Newberry Library would likely shed more light on the wage structure.

[464] Bessie Louise Pierce, *A History of Chicago, Volume Iii: The Rise of a Modern City, 1871-1893* (Chicago, IL: University of Chicago Press, 2007), 240. As cited in Ann Durkin Keating, *Building Chicago: Suburban Developers & the Creation of a Divided Metropolis* (Columbus, OH: Ohio State University Press, 1988), 133.

[465] Irving K. Pond, "Pullman—American's First Planned Industrial Town. By a Collaborator and Eyewitness," *Illinois Society of Architects Monthly Bulletin* 18-19, no. 12-1 (1934).

be tallied up to generate month-by-month costs or comparative information for construction projects happening in Chicago at the same time.

The construction records also provide considerable insight into the contractors who contributed to building Pullman. In addition to the company's own masons and tinners, records indicate that the company often hired additional experts for tuckpointing, slate roofing, brick painting, setting chimneys, and cut stone. The frequently hired contractors could be researched and connected to other construction projects in the period (John O'Hara for tuckpointing, and Toby & Smith for plastering, to name a few). Extra painters were hired as well. One "Scenic Painter" who appears frequently is Hughson Hawley, who went on to become a well-known architectural renderer and illustrator in New York City.[466] He came to Pullman from New York's Madison Square Theatre to design the interior decoration and backdrop of the auditorium.[467] He may have also begun creating artistic renderings of the town as he appears in a photographic portrait in 1883 with Beman and Barrett. Researching other individuals and companies listed among these contractors would likely reveal unknown relationships between Beman, Barrett, Williams, and other project personnel with networks of workmen and artisans within Chicago and beyond that could shed light on the social, ethnic, class, and geographic ties that helped build the town. The construction ledgers do not seem to include the workers under Williams who laid sewer and water pipe. As the plumbing profession was just coming into its own around 1880, learning more about Williams's labor force and suppliers would be illuminating.[468] The ledgers do reveal that Beman earned $400 per month at the height of construction in 1882, while Barrett was paid on an hourly basis from his office in New York.[469]

The people who constructed the Town of Pullman probably reflected the general ethnic and class make-up of Chicago at large at the time. Buder claimed that many of the workers were Irish but no systematic study has been done. A systematic survey of the laborers listed in employee records could produce statistics about worker ethnicity, percentage of foreign-born workers, age, and also work history.[470] Buder claims that many construction workers found long-term employment with the company after the town was completed, a pattern of hiring that could be examined with further comparison with company employee records. Such analysis could also map the few hundred workers who came from neighboring towns, which all saw a considerable boost in business and residency as Pullman sprung up. Most

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[466] Tom Fletcher, "Hughson Hawley," https://nyc-architecture.com/ARCH/ARCH-HughsonHawley.htm.

[467] An extensive description of the decorative interior of the theater appears in "The Arcadian City of Pullman.", 81–82 Additional description appears in Doty, *The Town of Pullman: Its Growth with Brief Accounts of Its Industries*.

[468] Keating, *Building Chicago: Suburban Developers & the Creation of a Divided Metropolis*, 54-60.

[469] Ledgers p.25 and 60.

[470] Employee Records at the South Suburban Genealogical Society would be the best resource for this kind of study.

workers, however, took the train to the site from Chicago. The Illinois Central ran "Pullman Specials" for the construction crew offering commuter tickets at reduced rates.[471]

Period commentary celebrated Pullman's practical efficiencies in construction and materials. Much of the work was performed by company employees, already experts in carving, painting, and molding work. Brick was made with clay dredged from the Calumet River, which also helped to ensure navigability of that waterway.[472] Stanley Buder suggested that wood was purchased at wholesale prices and green to be dried on site. The company did build a dry kiln so all its lumber going into the Palace Cars could be dried on site, although the quickly-ballooning Chicago lumberyards tended to sell much of their product un-dried so this factor may not have added efficiency in building Pullman per se.[473] Company carpenters then built standardized window sash and other details in bulk to be installed in the buildings as needed.[474] Construction proceeded very fast and work occurred six days a week for eleven hours each day. Pond remembered that construction proceeded so fast that the designers could barely stay ahead of the builders, and in some cases brought full-scale drawings to the construction site. Further investigation into the construction accounts could reveal more details about how Pullman, his architects, and his foremen tried to maximize efficiency with materials and labor.

The process of design and construction seemed to evolve on the ground at the town site. Pond remembers that Beman commanded the design and construction team, except in the area of the car shops. The architects started off in offices in the city but quickly moved to a temporary structure on the site and then to the second floor of the Administration Building tower, which no doubt aided in communication with the construction crews. Pond's memory that everyone operated under "broad co-operation" with "petty jealousies" developing between departments only "now and then" allows us only to imagine potential conflicts. Given the time pressure under which they were working, conflicts seem inevitable. Pond, who gives the only real description of the construction site, painted a picture of manic cooperation in which the designers were barely ahead of the builders (and in some cases behind them, creating measured drawings from already completed buildings). Drawings were created on demand over sleepless nights, engineering decisions were made as needed, and communication happened on site.

While Beman submitted design drawings in advance, which were approved by Pullman, some of the design decisions had to be made at the last minute and during construction. Several of Beman's drawings show features crossed out and altered, suggesting updates made after the original design.[475] Pond provided evocative descriptions of designing some of the ornament in concert with the materials

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[471] Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 52-53.

[472] Pond, "Pullman—American's First Planned Industrial Town. By a Collaborator and Eyewitness," 7; "The Arcadian City of Pullman.", 86

[473] "The Arcadian City of Pullman.", 73; Cronon, *Nature's Metropolis: Chicago and the Great West*, 148-206.

[474] Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 52.

[475] See for instance the crossed out front porch and altered window dimensions in "Rear Elevation, Flats in Block 6, South Section, East Side," frame 85, Reel 39, Art Institute.

and artisans on site. He remembered being on the scaffolding himself with the masons working out the brick bond and how to lay them out to create ornament.[476] He enjoyed designing ornament once the building was already underway because "one came to feel form as it grew under [one's] hands and feel it in relation to the wall or pier of which it was a constituent part."[477] This kind of organic design process certainly arose out of necessity but in his later years Pond perhaps romanticized building Pullman as an exercise in the "use of simple materials close at hand."[478] More research might reveal other dilemmas in engineering or design that were tackled at the last minute. Some examples of the collaboration between Beman and George Pullman might survive in their correspondence record, which could help complicate the narrative often included in the period commentary that Pullman himself was the "mastermind… that direct[ed] and determin[ed] every detail" of the town's design and construction.[479] Important evidence of the construction period may also be available archaeologically.

Figure 4.33. View from the Arcade Building, c. 1883. The Pullman State Historic Site. Collection: Pullman State Historic Site. Looking East from Arcade Building" The Pullman State Historic Site Collections. Accessed 2019-08-30. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=11758

[476] Pond, "Pullman—American's First Planned Industrial Town. By a Collaborator and Eyewitness," 6.

[477] *The Autobiography of Irving K. Pond: The Sons of Mary and Elihu* (Oak Park, IL: Hyoogen Press, 2009), 87.

[478] "Pullman—American's First Planned Industrial Town. By a Collaborator and Eyewitness," 6.

[479] "The Arcadian City of Pullman," 87.

4.E.4 Additional Housing

By fall 1882, the company decided to build houses on the north side of the central factory because demand had outgrown capacity in the original town plan. The new housing was built in two parts: in Blocks 27, 30, and 37 near the Union Foundry (between E 106th and E 103rd Streets between today's Maryland and Corliss Avenues) and in Blocks 20, 21, and 22 near the Allen Paper Wheel company (between 106th and 108th Streets).[480] These two areas of new housing contained several hundred houses designed by Beman and operated in the same manner as the original houses south of the factory. As described in an 1885 article, the foundry spawned so much housing that it "has almost founded a second city."[481]

[480] Buder, "The Model Town of Pullman: Town Planning and Social Control in the Gilded Age," 70.

[481] "The Arcadian City of Pullman.", 76

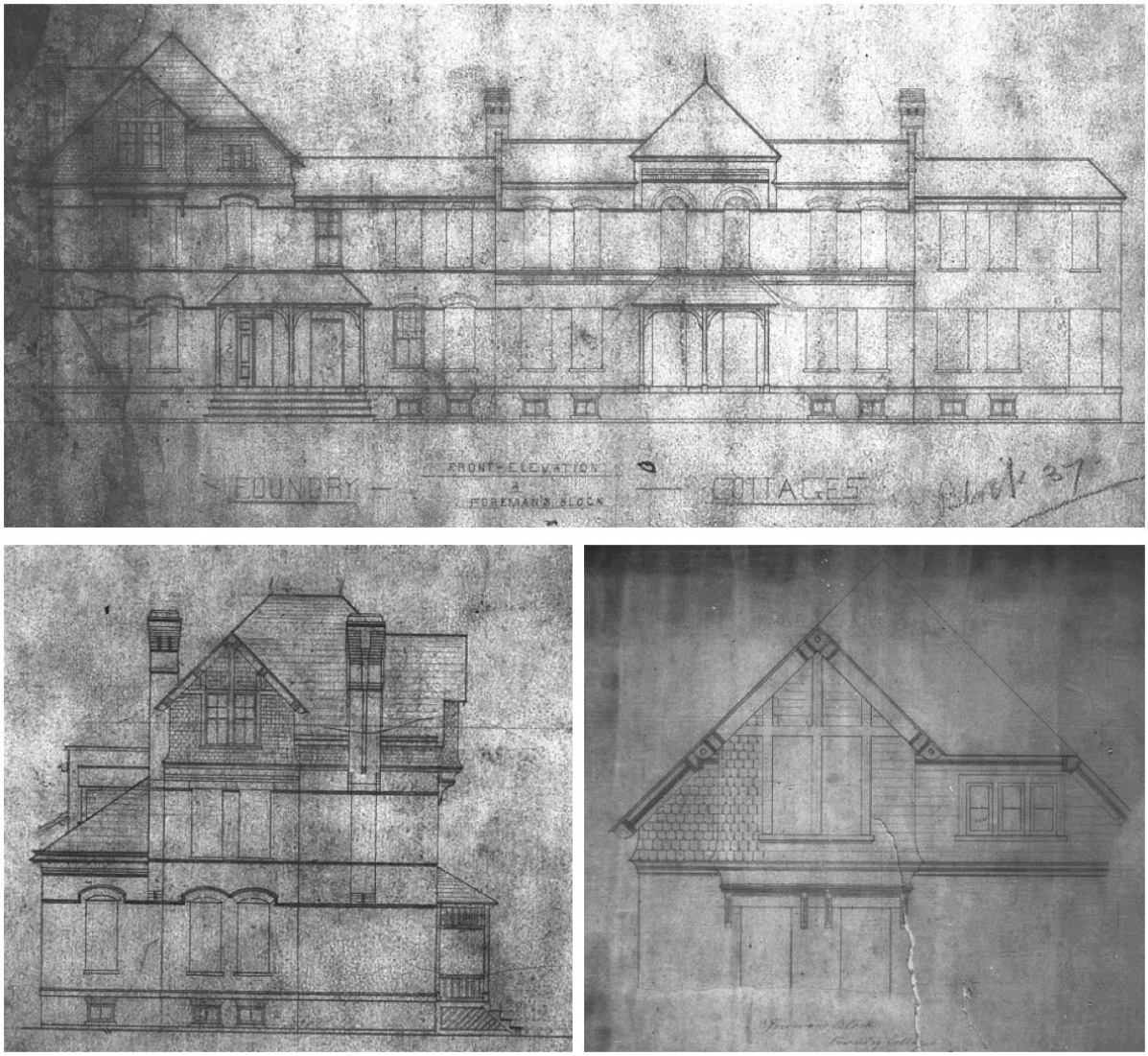

Figure 4.34. Foundry Cottages, Foreman's Block, Block 37. Front Elevation (top), Side Elevation (bottom left), and gable details (bottom right). Frames #114 and #115, Reel 39, Art Institute of Chicago.

As in Beman's original designs, the housing differentiated managers from workers. Only a handful of Beman's drawings of houses built in northern Pullman survive, and they only depict elevations for the "Foreman's Block" in Block 37, which now is filled by the Corliss High School on the north side of E 104th Street.[482] The foremen's houses, two-story houses with three-story versions on the ends of the row, feature more Queen Anne Style shingling and massing of multiple gables than in other areas.

The more modest units in northern Pullman, for which none of Beman's drawings survive, seem to follow most of the same patterns as the units designed south of the factory. The Rascher Map for 1892

[482] "Foundry Cottages, Foremen's Block," Frames 114, 115, 116, Reel 39.

shows that the units near the foundry closely resemble the rows constructed in southern Pullman complete with wooden sheds and variable façade setbacks. Beman also designed a new three-story tenement on the ends of Block 27 on 106th and 105th streets. The Rascher Map also indicates that residents in the northwest end of Block 27 had transformed the houses into several stores and a school, countering Buder's claim that residents in northern Pullman had to walk all the way to the Arcade to shop. This demonstrates some creative initiative on the part of the residents, and either some relinquishing of the original plan on the company's part or clandestine retail activity discovered by the cartographers.

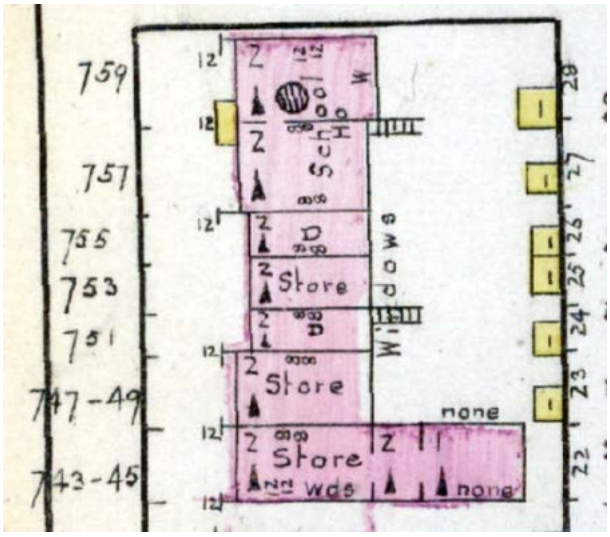

Figure 4.35. The northwest end of block 27 at 105th Street had stores and a school by 1892 to bring more convenience to these northern residents. 1892 Rascher Map.

The houses constructed near the Allen Paper Wheel company, however, were smaller than many others. The Rascher Map clearly shows that Fulton Street in Block 22 had 32 units whereas the same-sized block face on Ericksson Street in Block 30 near the foundry only had 26. None of Beman's drawings for these houses survive so architectural investigation of the extant structures is needed to compare the original floor plans. Another factor that indicates lower status of these housing units is their orientation to the street and each other. These houses are set back much less from the street than most others in Pullman. While this afforded them very large back yards, it removed the gracious front yard. Likewise, the façades did not feature the same variable setbacks as in other parts of Pullman. In other words, the façades mostly lined up with one another, reducing the visual variation that so many commentators argued reduced the urban or industrial feel of Pullman's residences. Many of the houses, however, appear to have repeated designs from Beman's Pullman repertoire. For instance, the southern half of North Champlain Ave (originally Stephenson) features the same two-story flats with mansard roof as were built on the southern ends of Block 15 and 16 in the original part of southern Pullman. All further research about housing types and lived experience in Pullman's domestic landscapes need to focus on these northern Pullman houses designed in 1882, in order to understand them as part of the Pullman Company's overall corporate endeavor.

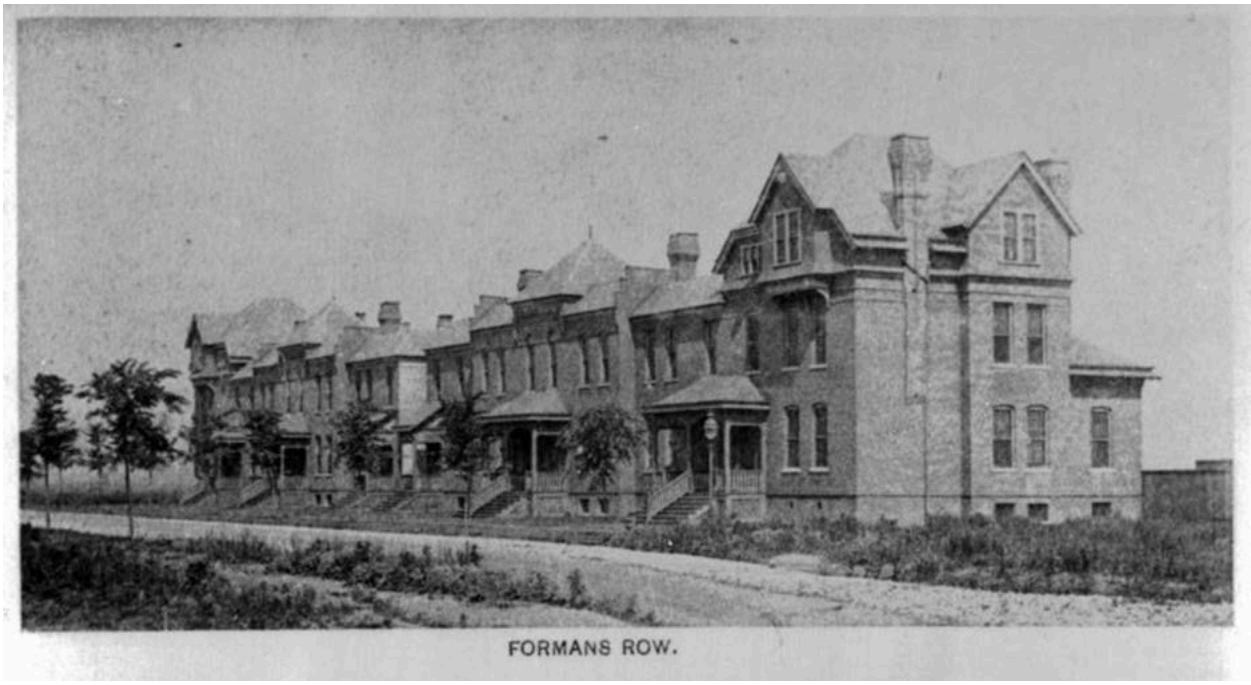

Figure 4.36. "Formans Row." [sic] early 1880s, PHSH, 12885: PFP.04.07.09.01, Paul Petraitis Collection. The Pullman State Historic Site. Collection: Pullman State Historic Site. Foreman's Row" The Pullman State Historic Site Collections. Accessed 2019-08-30. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=17166

4.E.5 Renting and Living in Pullman

The experience of moving into Pullman and renting from the company could be further investigated in the company records. Studies of power relationships in other company towns often find that companies wielded power in the ways they distributed housing, chose who got to live where, and responded to requests for maintenance or relocation.[483] Some instances of this are known, for instance Buder's chapter 7 investigated which Pullman employees moved the fastest to purchase their own houses. Also, he noted that the company favored employees in firing decisions who rented in the town. More investigation along these lines should be done especially with a spatial component to see whether different ethnicities, classes, professional skills, or religious identities tended to live together or not.

Further studies of this kind could be pursued at Pullman in company records by learning more about the decision-making process and the rental records. The company ledger for the Town of Pullman covering 1880–1885 features pages labeled "Rentals," which record cash going into various accounts by date but give no information connected to specific rented buildings or tenants. Likewise, the section on "Repairs to Buildings" could offer an opportunity to find seasonal patterns in repair work, or the parts of town

[483] Hoagland, *Mine Towns: Buildings for Workers in Michigan's Copper Country*.

that saw the most repairs needed or performed.[484] These might help illuminate ways that the company controlled the experience of its early residents.

Likewise, some records could help historians understand how residents negotiated their needs in this unusual town. The 1885 article *The Arcadian Town of Pullman* noted that only 10% of people chose to use gas as heat, despite it being available. A closer study of adoption of new utility types and amenities could help us understand the choices in daily life for Pullman residents.

Figure 4.37. Champlain Avenue. Undated photograph. Pullman State Historical Site. The Pullman State Historic Site. Collection: Pullman State Historic Site. Pullman Factory Workers Walking on Champlain Ave." The Pullman State Historic Site Collections. Accessed 2019-08-30. http://www.pullman-museum.org/pshs/pshsFullRecord.php?collection=pshs&pointer=11909

4.E.6 Transition to Private Property

In 1898, in the year after George Pullman died, the Illinois Attorney General sued the Pullman company arguing that its charter provided only for the manufacture of train cars and that running the town, which involved operations in real estate, gas, water, heating, brickmaking, and maintenance, put the company in violation. In other words, the judge ruled that the separate Pullman Land Association did not insulate

[484] "Town of Pullman 1880–1885," 03/02/03 Shelf 28 Ledger 308, Pullman Company collection, Newberry Library.

these operations enough. After appeals through the circuit courts, the Illinois Supreme Court ruled in October that the company was indeed defying its charter by operating the town. The court gave the company five years to divest itself. In 1903 the company was granted a five-year extension and the town finally sold off largely in 1907.

The process by which the company divested itself of the town deserves significant research. One of the only accounts comes off-hand from Graham Taylor in 1915 who suggested that many Pullman tenants bought the houses they occupied. The rates, he suggested were reasonable: prices set at one hundred times monthly rent payable in monthly installments "scarcely larger than rent." Understanding the relative profits for the company of these sales, which went through the Pullman Land Association, would be important to study, as would the distribution, both spatially and ethnically, of the employees who chose or were able to buy. [485]

Interestingly, Taylor also indicates Pullman associates who bought parts of the town themselves. Mrs. Pullman bought the Arcade "to retain some remnant of the cherished project of her husband." Their daughter Florence, now Mrs. Frank O. Lowden, purchased some of the tenements because they were "unsuitable" (presumably too expensive) for sale to their tenants. Interestingly, she allowed the same "house boss" to remain in charge of overseeing maintenance and rent collection, suggesting that the experience of company oversight changed very little for the inhabitants.

Likewise, the Pullman Land Association bought some of the smallest housing units, including many of the northern Pullman units built near the Allen Paper Wheel factory, to operate as rentals, as indicated in the map in Figure 4.38. This retention may reflect the tenants' financial inability to buy units at that time, but it also suggests that the company associates continued to profit from some of the town real estate. New research could better illuminate how the courts allowed this arrangement to stand, since it meant very little change from the period of company ownership. Further, when did the Land Association eventually offer those houses for sale? Such an investigation could start in the company records. The Land Association created several maps and atlases in the 1900s presumably to facilitate sales. The records of the sales have not been located in the company records at the Newberry Library or elsewhere, but they may survive. Short of locating these, deed searches for Pullman town properties could be performed by systematic sample to discover comparative trends in the dates, prices, and buyers of houses in different parts of town. The company performed a Property Evaluation in the 1890s to which sales prices in 1907 might be fruitfully compared.[486]

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[485] Records of the Pullman Land Association exist in several places in the company records at the Newberry Library. Some that may include records of sales include "Pullman Land Association" records in the Robert Todd Lincoln presidential papers, 01/01/02 Box 1, folders 4–14; "Pullman Land Association Notes 1897" in the A. S. Weinsheimer files, 02/01/03, Box1, Folder 13a; "Property Contracts – Pullman Land Association and Jerry Cenosky, 1915," in 02/01/06, Box 91, Folder 594.

[486] "Pullman Land Association Property Evaluation 1891," Office of the President Robert T. Lincoln, 01/01/02 Box 1, Folder 7, Pullman Company Collection, Newberry Library. The first evaluation in this folder is dated 1891, but the second appears to have valuations from 1899, and this last document contains the town buildings.

Figure 4.38. "Map of the Lands of the Pullman Land Association and of The Pullman Company," 1905, revised 1907, Town Repair Department, Pullman Company. Pullman Company Records, Newberry Library. Red indicated land to be sold; Pink indicated land to be kept for company purposes; Blue indicated land already sold; Green and Yellow indicated land under lease to the Pullman Land Association, and Gray land to be leased. Note that the smallest northern Pullman housing units originally built near the Allen Paper Wheel factory were retained by the company.

4.F Interpreting Pullman's Model Town

4.F.1 Reception

The building and completion of the Town of Pullman received a lot of favorable press. Among the first publications to highlight the project was *Builder and Wood-Worker* magazine, for which Beman was a former contributor. Appropriately, it focused quite a bit on the design and construction. "It is comparatively an easy matter to make a handsome city on paper—but it is quite another matter to realize it in brick and mortar. Hence it is no exaggeration to pronounce the work now visible at Pullman something akin to an inspiration."[487] But even this professional trade journal included overly-ambitious claims that the town was solving the primary problem of the industrial age: "The City of Pullman

[487] "A Model Manufacturing City," *Scientific American* 45, no. 4 (1881).

represents an almost ideal solution of the conflict between capital and labor." An article called "A Model Manufacturing City," which appeared first in *Railway Age* and was reprinted in multiple magazines including *Scientific American*, described Pullman as "an exemplification of practical philanthropy based upon business sagacity."[488] The town, many hoped, would elevate the condition of wage-workers with beauty, cleanliness, and physical order. Curiously, Pullman may have outdone even the European utopianists, for when the Duke of Sutherland visited America in early 1881, he visited Pullman, expressed "himself highly pleased with the arrangement and construction of the workmen's dwellings, and was furnished with a plan of the buildings, with the view of erecting similar cottages for his workmen in the North."[489] A few dozen articles along these lines appeared in the early 1880s mixing a sense of wonder at the town's scale and optimism in its endeavor.[490]

The first critical commentary appeared in 1885 from Richard T. Ely in *Harper's Magazine*.[491] Ely embedded himself in the town to report on the degree to which this experiment was creating a "social fabric" that offered working people opportunities, protection, and also the democratic freedoms of American citizens.

On the one hand, Ely found much to praise. Beman had successfully designed both a pleasing unity and convincing variety. The amenities, such as school, shopping arcade, library, and theater, all created efficient walking routes and adequate access to needs, Ely argued. The rents were deemed fair and the profitability for the PPCC a whopping success. The combination of economic gain with philanthropy seemed among the factors most remarkable to Ely. One of his vignettes indicated ways that the company was spreading its idea of the "commercial value of beauty" by teaching modern consumer behavior to its poorest residents. The company apparently offered wallpaper at wholesale prices with free installation to residents. Ely was told that their excitement at being able to exercise their own choice in pattern and color "led the people to value what they had acquired."[492]

However, Ely also cautioned his readers against Pullman's overwhelming centralization of power and the lack of personal liberty and individual recourse. Calling Pullman's society both a "monopoly" and "feudalism," Ely argued that the company's overwhelming power far outshone that of Chancellor Bismarck in Germany. "Whether the power be exercised rightfully or wrongfully, it is there all the same, and every man, woman, and child in the town is completely at its mercy, and it can be avoided only by

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[488] Ibid.

[489] "Local Notes," *Inverness Courier*, July 19 1881.

[490] See for instance "Founding a City."; "The Town of 'Pullman'."; "The Arcadian City of Pullman." The scrapbooks of newspaper clippings kept by the company would yield dozens of additional articles from local, national, and international venues. Scrapbooks are in the Newberry Library, which have made them available online: http://collections.carli.illinois.edu/cdm/landingpage/collection/nby_pullman

[491] Ely, "Pullman: A Social Study."

[492] Ibid., 463.

emigration."[493] Surveillance and restriction were felt keenly by residents, Ely argued. Whatever benefits Ely found in Pullman were far outweighed in his opinion by its concentration of power in the company which he ultimately deemed "un-American."[494] "[T]he history of the world has long ago demonstrated that no class of men are fit to be intrusted [*sic*] with unlimited power."[495]

In addition to the problems of centralized authority, Ely also strongly criticized the lack of democratic processes. Residents, Ely found, had few options of exercising their rights as citizens to speak freely and organize. No newspaper served the town. No public mechanism existed for residents to express their opinions, as any complaints would have to go through Pullman officials, potentially risking employment. Ely found that women seeking to found charity organizations and mutual assurance programs were actively discouraged. Too few church buildings left neglected the religious well-being of the town's 8,000 residents. He admitted that Pullman was still in its "infancy" and suggested that "some co-operative features might be added" to build in democratic governance and reduce the feeling of being in what he cleverly called a "gilded cage."[496] Despite his urging leaders not to copy Pullman's anti-democratic set-up, his article still seemed optimistic. It seemed a cautionary tale for this rapidly industrializing nation. Within ten years, however, the problems Ely foresaw indeed contributed to Pullman's downfall.

In the 1910s, Pullman became a major subject of Graham Romeyn Taylor's Satellite Cities studies. Approximately thirty years after its founding and twenty years after the strike, Taylor saw the town of Pullman as essentially functional but with an air of "faded glory." He summed up the Pullman story as an example of the "failure to reckon with the human element" of industrial production. "The experience at Pullman has shown that while the men have not been able to dictate to the company as to work, the company has not been able to dictate to the men as to life." He argued, however, that what may have seemed like an impasse actually signaled the triumph of political action toward an American common good.[497]

4.F.2 Vernacular Architecture and the Interpretation of Space over Time

In addition to the company records and period documents, the physical fabric of the Town of Pullman constitutes a major body of primary evidence for interpreting social life. The surviving town buildings—of which there are over 1,000—provide valuable non-written material culture that could shed light on many of the questions about the design and construction process, and the effects of aesthetics and domestic landscape on everyday life.

The built environment, however, can also provide incredibly valuable evidence about the Town of Pullman in the years after initial construction and occupation. While so much was published and

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[493] Ibid., 463-64.

[494] Ibid., 465.

[495] Ibid.

[496] Ibid., 465, 66.

[497] Taylor, *Satellite Cities: A Study of Industrial Suburbs*, 67.

recorded about the town's construction, less is known about the years after company divestment in 1907 and before historic preservation began in the 1960s. In those intervening years, thousands of families called Pullman home and leveraged the high-quality housing and layout to accommodate changing needs. The meanings of this place for these families is less researched and less recorded in historical narratives, but no less important for the successful interpretation of Pullman today.

To help access these meanings, the methodological approach of Vernacular Architecture studies provides a useful framework. This approach, often described as historical archaeology for standing buildings, can illuminate patterns of social habit and architectural change to reveal the lives and ideas of twentieth-century residents.[498] Pullman, in fact, offers a very rich opportunity for studying architectural change over time as the similarity of buildings will make changes easy to see and record. Relevant changes could be stylistic, like modernist and colonial revival door surrounds added to flats on Champlain Avenue to update the homes to early twentieth-century fashions. Other exterior changes were practical, like enclosing front porches and adding on to the back to add living and storage space to accommodate changing families and expectations of more square footage.

Figure 4.39. Colonial Revival-style door surround added to 11211–13 Champlain Avenue. Photo S. Scarlett.

[498] Thomas Carter and Elizabeth C. Cromley, *Invitation to Vernacular Architecture: A Guide to the Study of Ordinary Buildings and Landscapes* (Knoxville, TN: University of Tennessee Press, 2005).

Figure 4.40. Moderne-style door surround added to 11233 Champlain Avenue. Photo S. Scarlett.

A good number of Pullman residents altered their houses to accommodate growing and needed retail and service operations. One extant building that could help illuminate these kinds of changes stands at 11260 South Champlain Ave, where a corner store was added to a two-and-a-half story house at the end of a row of flats. Studying this building and others like it could add valuable on-the-ground architectural record of the choices people made in the face of changing social and cultural needs. Combined with building permits, tax records, deed records, census and directory data, and any other available community data, houses like this could help tell the story of early twentieth-century Pullman residents.

Figure 4.41. 11260 S. Champlain Ave (formerly Watt Ave) had a retail store added to the front and photographed c. 1925. It still stands today as valuable architectural evidence of early twentieth-century life. Google Street View, accessed 9 August 2019.

Systematic research of interior changes could add significantly to our understanding of how these houses worked for Pullman residents in the twentieth century. Many of the small flats were combined to create larger two-story apartments. Some single houses were combined to create very large houses. The three-story apartment building now known as the Historic Pullman Center was altered after company divestment to serve as a Masonic Hall, a change that indicates how quickly residents were eager to transform their town to match their own needs and desires.

Additional surveys could address the use of the yard and changing outbuildings. Many of the original houses featured small sheds in the rear alleys designated for storage of coal and wood. No surviving 1880s sheds are known. Garages began to appear in the 1930s, many of which have since been replaced with larger more modern examples. Changing garages constitute perhaps the most prolific structural changes in the Pullman neighborhood overall. The story of updating residential space to accommodate automobile transportation now has several chapters, as it were. The first garages in the alleys replaced the fuel storage sheds, which themselves were made outdated by central heating. The story of accommodating technological change can be read in the back alleys as well as in the Pullman shops.

4.F.3 Aesthetics and Everyday Experience

The design of buildings in Pullman attracted attention at the time of its founding and certainly plays a part in the town's late twentieth-century gentrification. While many resources exist for contextualizing architect Beman's work in his career trajectory and American architecture broadly, fewer exist for analyzing the role of aesthetics in the experiences of Pullman workers, and in the neighborhood's cyclical popularity in real estate over the twentieth and into the twenty-first century. This line of interpretation, however, has the potential to animate the experiences of visitors to the site, and engage with current scholarship in embodiment and everyday experience.

The best consideration of aesthetics in Pullman so far has been done by Thomas Schlereth and Amanda Rees. Schlereth argues convincingly for the English influence (especially from Saltaire) in Pullman's decision to create an aesthetically cohesive town.[499] In her comparison of architectural and landscape styles in Pullman and Port Sunlight in England, Rees argues that several considerations made Pullman's use of aesthetics remarkable for the time period. Beman and Barrett both used Pullman as an experimental "sandbox" for working out their burgeoning engagement with the Beaux Arts, which they both fulfilled a few years later in Chicago's White City and in their later careers.[500] More importantly, Rees argues that the "total design" consistency in Pullman made a big difference in the way people experienced the town, both positively and negatively.

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[499] Schlereth, "Solon Spencer Beman, Pullman, and the European Influence on and Interest in His Chicago Architecture."

[500] Amanda Rees, "Nineteenth-Century Planned Industrial Communities and the Role of Aesthetics in Spatial Practices: The Visual Ideologies of Pullman and Port Sunlight," *Journal of Cultural Geography* 29, no. 2 (2012): 195.

For the company, the aesthetic consistency strengthened the Pullman brand and played a vital role in its programs of social control. First, a visually consistent and fashionable town matched the Pullman Palace Cars themselves, which sold a consistent and reliable level of comfort and fashion for travelers across the country. The Pullman Palace Cars were recognized largely because they concealed the railroad machinery "leaving only the beauty at the fore."[501] Likewise, Pullman's town in some ways concealed the "machinery" of the industrial system in a middle-class definition of beauty. The town and the train cars also bore similarity because they both used materials and fashion to openly designate hierarchical spaces. The town separated public amenities, managers' houses, houses for skilled labor, houses for unskilled workers etc., which bolstered the hierarchy that Pullman cars created among passengers and workers in train travel, between luxury passengers, ordinary passengers, and the working porters.

Second, a consistent aesthetic ensured the kind of social control desired by the company in laying out the town. Environmental determinism, or the idea that a person's surroundings can shape their actions, underlies paternalist town planning. Pullman's aesthetics had strong moralistic meanings for its designers and period commentators. Charles Dudley Warner's comments in *Harper's Magazine* in 1888 capture the moralistic faith in environmental determinism:

> [B]oth the health and *morale* of the town are exceptional, and the moral tone of the workmen has constantly improved under the agreeable surroundings. Those who prefer the kind of independence that gives them filthy homes and demoralizing associations seem to like to live elsewhere.[502]

For Pullman himself, and those working with him, creating a "beautiful" and "agreeable" environment would create agreeable workers. Their reliance on "aesthetic moralism," the belief that one aesthetic is better than another, normalized middle-class fashions and excluded alternative tastes.

For workers, the aesthetics of town affected their feelings about the company and job performance, but not always in the ways Pullman had hoped. Rees argues that the cheapest housing in town, intended for the less skilled workers, had few aesthetic considerations. The tenement-style buildings differed little from the multi-units available in other cities and towns throughout the industrializing US. This failure to aesthetically reimagine the housing for the poorest workers, as Pullman had done for everyone else in town, contributed to heightened class tension. Workers felt excluded from the middle-class lifestyle built all around them. Just as they lacked leisure time to enjoy the pathways, parks, and stores heralded as perks of residency, their housing lacked the aesthetic attention of other structures and stood out from the otherwise cohesive whole.[503]

Indeed, commentators at the time of Pullman's construction recognized the discomfort caused among workers by the attention paid to Pullman's idea of "beauty." Historian Alan Trachtenberg highlights this mismatch in his analysis of socialist economist Richard T. Ely's 1885 commentary. Ely wrote that "It is

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[501] As quoted in Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 11.

[502] As quoted in Rees, "Nineteenth-Century Planned Industrial Communities and the Role of Aesthetics in Spatial Practices: The Visual Ideologies of Pullman and Port Sunlight," 198.

[503] Ibid., 202–204.

avowedly part of the design of Pullman to surround laborers as far as possible with all the privileges of large wealth," and notes specifically the role of architectural features like French roofs and turrets in creating this effect.[504] Pullman's aesthetic, Trachtenberg wrote, "is alien to the daily lives" of Pullman's working people, and he cites Ely's final condemnation: "[Pullman] is benevolent, well-wishing feudalism, which desires the happiness of the people, but in such way as shall please the authorities."[505]

Pullman's appearance also pleased reformers rallying against what they saw as the evils of the city. Pullman intended specifically to spatially separate, at least nominally, people's houses from the noxious fumes and sounds of the factories to overcome general complaints about the unplanned nature of urban industrial arrangements. Almost all the period commentary remarked that Beman's use of color, variety, and small-scale housing contrasted favorably with what one commentator called the "painful, barrack-like uniformity" of urban streetscapes.[506] The moral judgement underlying this strain of commentary reveals the cultural value being placed on individuality and domesticity.

Future interpretive work could consider aesthetics in Pullman in the context of everyday experience for Chicagoans and for people arriving from other cities or countries. Models include the work of geographers James and Nancy Duncan, who meticulously isolate the way the "country" aesthetic of Bedford, New York has normalized upper-middle-class values over a century; Zachary Violette, who argues that urban tenement builders employed aesthetics differently whether they were residents of the community or outside reformers; William Littmann, who uses the experience of moving through industrial towns to interpret worker reactions to the aesthetics of planned communities; and Sarah Fayen Scarlett who compares the movement of workers and managers in industrial landscapes to map identity shifts.[507]

4.G Later American Comparative Examples

Historian of planned company towns Margaret Crawford argues that the Pullman Strike marked the end of one era in American company town planning and the beginning of another.[508] Never again did American companies seek to be both employer and landlord, as Pullman had famously described his endeavor. The Congressional Commission identified Pullman's refusal to lower rents even after lowering

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[504] As quoted in Trachtenberg, *The Incorporation of America: Culture and Society in the Gilded Age*, 224.

[505] Ibid.

[506] "The Arcadian City of Pullman.", 78

[507] James S Duncan and Nancy G Duncan, *Landscapes of Privilege: The Politics of the Aesthetic in an American Suburb* (New York, NY: Routledge, 2003); Zachary J. Violette, *The Decorated Tenement: How Immigrant Builders and Architects Transformed the Slum in the Gilded Age* (Minneapolis: University of Minnesota Press, 2019); William Littmann, "Designing Obedience: The Architecture and Landscape of Welfare Capitalism, 1880–1930," *International Labor and Working-Class History* 53 (1998): 88-115; Sarah Fayen Scarlett, "Crossing the Milwaukee River: A Case Study in Mapping Mobility and Class Geographies.," in *Landscapes of Mobility: Culture, Politics, and Place-Making*, ed. Arijit Sen and Jennifer Johung (Burlington, VT: Ashgate Pub. Limited, 2013), 87-104.

[508] Crawford, *Building the Workingman's Paradise: The Design of American Company Towns*, 37-45.

wages as the immediate cause of the disastrous strike. Leaders of other companies for many years later openly stated their fears of repeating Pullman's mistakes. Even in 1915, in his influential book *Satellite Cities*, Graham Taylor pointed out companies controlling town development, "Time and again the paternalistic mistakes of Pullman were given as justification for a 'do-as-little-as-you-have-to" policy in shaping town conditions."[509]

The concept of a satellite city developed in the early twentieth century to explain towns that were spatially and governmentally independent of a major city, but which grew, specifically as a result of important manufacturing establishments, to become industrial suburbs *and* cities in their own right, inexorably linked to the central city. Recognizing that the pressures that forced industries out of the central cities had "civic consequences," a sociological and economic analysis of the phenomenon of these "made-to-order cities" just before WWI noted that for these cities, the "problem involved in the attempt to impose good government, which is the idea of so many, [had] so far has not worked out in our American communities."[510]

As early as 1893 it was recognized that as Chicago grew in size, the rail network and burgeoning manufacturing sector "stimulated the growth of an unusually large number of manufacturing towns as suburbs of Chicago," and Pullman stood out among them. As it was noted at the time, it had "become famous by reason of its having been built with a special view to providing workmen with comfortable homes, pleasant surroundings, and everything necessary for their convenience and social enjoyment."[511]

The new era of company towns, according to Crawford, did not abandon beliefs in environmental determinism, but rather transferred authority from a single company figurehead to professional urban planners at the start and to affiliated land holding companies to act as landlords in the long run.[512] Crawford points out that between 1905 and 1939 the number of company towns in the US multiplied more than fourfold. The primary difference between towns pre and post-Pullman was that the latter had been professionally designed with the lessons of Pullman in mind.[513]

4.G.1 Inspired by Pullman

Pullman inspired a few planned communities in the years immediately following its establishment. As early as 1883, the Proctor & Gamble Company outside of Cincinnati hired Beman to design a model

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[509] As cited in Green, *The Company Town: The Industrial Edens and Satanic Mills That Shaped the American Economy*, 113.

[510] Taylor, *Satellite Cities: A Study of Industrial Suburbs*, vii, ix, x.

[511] The Religious Herald, *Picturesque Chicago and Guide to the World's Fair*, 118.

[512] Crawford, *Building the Workingman's Paradise: The Design of American Company Towns*, 43-45.

[513] Ibid., 45.

town. The home of Ivory Soap, the town of Ivorydale was intended to include a large town like Pullman but only the factory and warehouse were built.[514]

Figure 4.42. Beman designed Ivorydale, Ohio for Proctor & Gamble starting in 1883.

Beman's work at Pullman also led him to design the first planned middle-class community in the Kensington-Hyde Park area. Eventually called Rosalie Villas, this neighborhood of small Queen Anne style houses was financed by a developer who intended to connect Jackson and Washington parks with the Midway Plaisance of Olmstead's Columbian Exposition design. Completed between 1884 and 1890, Rosalie Villas can be seen as Beman's attempt to bring some of the amenities he created at Pullman to middle-class Chicagoans.[515]

Hallidayboro in southern Illinois was conceived by William P. Halliday for a growing mining town (1890–1915). The wealthy industrialist was friends and business associates with Pullman, who had gifted Halliday his own Pullman Palace Car. He invested in a new town modeled on Pullman for employees at this mine, which had been sunk in 1884. Hallidayboro resembled Pullman in some important and flawed ways: it depended on a single industry and it established no form of democratic government. But in

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[514] Pullman Company. Personnel Administration Dept. and Pullman's Palace Car Company, "Records, 1875-1976 (Bulk 1875-1970)," 178–79; Schlereth, "Solon Spencer Beman, Pullman, and the European Influence on and Interest in His Chicago Architecture."

[515] "Solon Spencer Beman, Pullman, and the European Influence on and Interest in His Chicago Architecture."

other ways it differed considerably. The mine was among the only ones that hired African Americans, so Hallidayboro included a considerable black community.[516]

4.G.2 Reacting to Pullman

Kohler, Wisconsin, a planned company town founded in 1900 four miles west of Sheboygan highlights twentieth-century lessons from nineteenth-century oversteps at Pullman. The Kohler family had developed a successful company making plumbing fixtures and enameled ware, new items in high demand with expanding domestic kitchens and bathrooms. Having moved to their site at the turn of the century, president Walter Kohler disliked the haphazard look of the houses his employees were building so he sought a more orderly solution. While a generation younger than Pullman, Kohler's approach and goals seemed quite similar. He took a trip to Europe to tour model industrial towns in Germany (his family's homeland) and England. He became quite taken with the English Garden City movement, which emphasized naturalistic surroundings both for agricultural production and psychological well-being. While he praised and adopted several tenets of Garden City design, Kohler specifically rejected any model that neared European feudalism with housing assigned from on high. He wanted his employees to purchase their own homes in the "American Way." This statement of course stands in conflict with Pullman's approach of fifty years earlier. In fact, Kohler's statement indicates the extent to which homeownership had captured the American imagination by the 1900s, and how rejected Pullman's approach had become. Kohler contracted Werner Hegemann who hired landscape architect Elbert Peets to create the town. It featured a greenbelt around the perimeter of the town, curving roads, and many designs for English country cottage designs.[517]

The Endicott-Johnson Shoe Company in Endicott, New York developed a community that eventually won considerable favor among its employees starting in 1900. The manufacturer built some new factories and at the same time laid out a street grid that is today much of Endicott. For the first decade, however, most employees still commuted on a convenient streetcar line from neighboring towns. Then, company partner George F. Johnson decided to make company land near the factories available for employees to build houses. They could get financing through the company and own the land and the house when the loan was paid off. By 1920, many employees had taken advantage of this housing plan, and they built a large archway entrance to the town with the company's motto: "Home of the Square Deal." Contributing to this approach to company-employee relations the company also provided medical clinics and recreational facilities.[518]

Typifying the post-Pullman trend in company towns according to Crawford is the work of Landscape architect Warren Manning. Manning's work for company-run model villages epitomizes "corporate welfare" in the early twentieth century. Warren designed the town of Gwinn, Michigan for Cleveland Cliffs Mining Company in the iron range of the central Upper Peninsula of Michigan. Completed in 1907,

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[516] Wright, "A Community in a Garden: The Pullman Paradigm in Southern Illinois."

[517] Arnold R Alanen and Thomas J Peltin, *Kohler, Wisconsin, Planning and Paternalism in a Model Industrial Village* (Cambridge, MA: American Institute of Planners, 1978).

[518] Crawford, *Building the Workingman's Paradise: The Design of American Company Towns*; Peter C Little, *Toxic Town: Ibm, Pollution, and Industrial Risks* (New York, NY: NYU Press, 2014).

Gwinn was intended to attract and retain workers, managers, and related town functionaries at the Cleveland Cliffs' new iron mine. The company president William Mather, among the wealthiest industrialists in Cleveland, followed elite notions of noblesse-oblige and applied them to providing aid and opportunity to his employees. Like Pullman, Mather's Gwinn offered railroad access, a school, well-landscaped public spaces, and housing that offered some architectural variety but also clear hierarchical differentiation between company officials and laborers. Manning's layout and design for the town marked the height of his career, and also represents one of the most comprehensively designed company towns of this period. One of many features setting it apart from Pullman was the company's multiple options for real estate tenure. Workers could buy company-built houses at cost on reasonable terms, build their own on land purchased from the company, or rent. Pullman's insistence on real estate profit-making had all but disappeared from company towns by this time.[519]

Manning also designed the town of Warren, Arizona for the Calumet & Arizona Mining Company (the town was named for a company official, not the designer). The C&A company was founded by second-generation managers from the Calumet & Hecla in northern Michigan, for which Manning also worked. This already successful company set out at first, in 1905, to create a model town to bring temperance and more modern town surroundings to the haphazard and saloon-heavy town of Bisbee. But during construction, company officials decided that instead of selling the small but fashionable bungalows in Warren to foremen and white-collar workers, they would offer the houses for sale to miners as a way to both gain favor and tie them financially and geographically to homeownership in the region. This tactic indicates again the importance of homeownership in the evolving story of twentieth-century corporate paternalism.[520]

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[519] Arnold R Alanen and Lynn Bjorkman, "Plats, Parks, Playgrounds, and Plants : Warren H. Manning's Landscape Designs for the Mining Districts of Michigan's Upper Peninsula, 1899-1932," *IA: The Journal of the Society for Industrial Archaeology* 24, no. 1 (1998): 41-60; Robin S. Karson, William Gwinn Mather, and Library of American Landscape History, *The Muses of Gwinn: Art and Nature in a Garden Designed by Warren H. Manning, Charles A. Platt & Ellen Biddle Shipman* (Sagaponack, N.Y: Sagapress, 1995).

[520] Lynn Bjorkman, "Warren, Arizona: 'The City Beautiful' and 'an Ideal City' in the West," *The Mining History Journal* 6, no. 1999 (1999): 52-62; Katherine Benton-Cohen, *Borderline Americans: Racial Division and Labor War in the Arizona Borderlands* (Cambridge: Harvard University Press, 2009); Alanen and Bjorkman, "Plats, Parks, Playgrounds, and Plants : Warren H. Manning's Landscape Designs for the Mining Districts of Michigan's Upper Peninsula, 1899-1932."

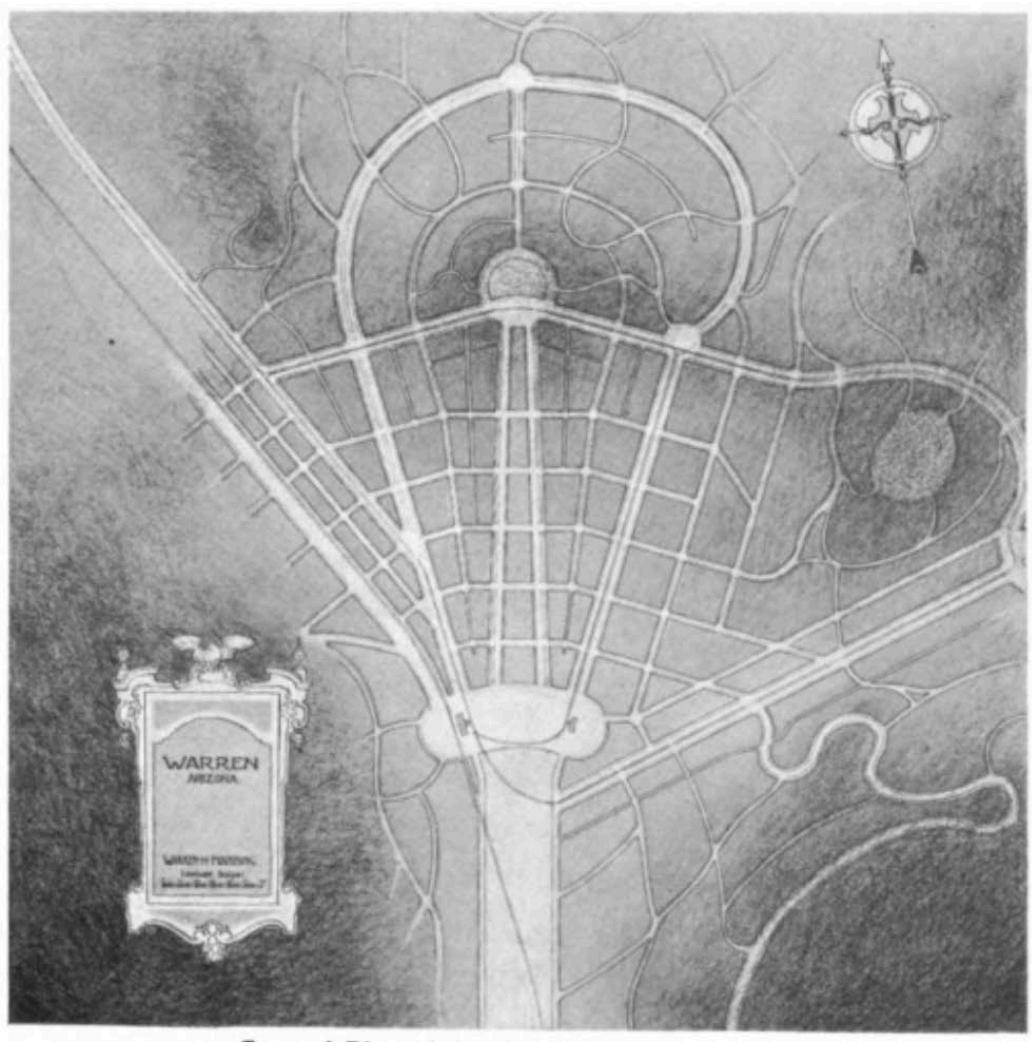

Figure 4.43. Conceptual drawing of Warren, Arizona, a planned community for the Calumet & Arizona Mining Company, 1908. From Huger Elliott, "An Ideal City in the West," Architectural Review 15, no. 9 (September 1908), 137.

Not all companies building model towns hired professional designers, however. Charles G. Roebling laid out the streets and town plan for Roebling, New Jersey for his family company. John A. Roebling's sons decided to develop their own steel mill to provide the material to make the industrial cables that their father had made famous in the Brooklyn Bridge and other innovative suspension bridges. Most steel mill companies had begun selling houses to their employees after the Homestead Strike of 1892. The town started in 1906 with the Roebling Inn, a hotel and tavern, and expanded to include a bakery, general store, doctor's office, and barber. Houses were constructed of brick under the direction of the company,

and eventually included by the 1910s, party-wall townhouse apartment buildings, duplexes, larger single-family houses for the foremen, and also brick boardinghouses.[521]

[521] Crawford, *Building the Workingman's Paradise: The Design of American Company Towns*, 52; Clifford W Zink, *The Roebling Legacy* (Princeton, NJ: Princeton Landmark Publications, 2011).

CHAPTER 5
TECHNOLOGY SYSTEMS AT PULLMAN

By the time of the World's Columbian Exposition, the Pullman factory was churning out a truly remarkable product, and a great quantity of it. At that time (1893), more than 15,000 employees used over 51 million board feet of lumber and 85,000 tons of iron to turn out 313 sleeping cars, 626 passenger cars, and 939 streetcars a year, not to mention the 12,520 freight cars that were in many ways the backbone of their business. It was noted at the time that "Coupled together, these cars would make a train over one hundred miles long."[522] On one 80-acre parcel of land, George Pullman created an integrated manufacturing system where raw materials arrived by train and finished cars rolled out on those same tracks at a rate of something like forty-five cars a day on average.

One Parisian traveler in 1893 noted, rather picturesquely that,

> seeing the colossal, vibrating machines with the rotating wheels and their steam whistles is a majestic and imposing site. The rooms where they keep the materials have a Dante-esque quality with workers covered with coal and sweat, tending the fiery red flames and ovens that demand a constant supply of fuel. … A sawmill is used to cut gigantic trees, and there is also a foundry, carpentry shop, and glass, painting, and tapestry workshops. Trains arrive continuously to supply all the materials needed by the workers. At the end of the process, other trains transport the finished luxury railroad car … that the workers have constructed from the materials."[523]

Less enunciated by this traveler, but equally as important, was that this car building empire required copious amounts of managerial oversight and coordination. And if one considers the running of Pullman cars on the railroads all across America, the organizational challenge is staggering.

Pullman's creation, then, fully qualifies as a prime example of what historians of technology refer to as a technological system (see Section 5.C). It was not at all the first, nor the first intentional one, and it was certainly not the last. But it can be studied from numerous angles to bring out both characteristic and potentially unique aspects of American industrialization in the later nineteenth century, its heyday in the early twentieth, and its decline, decay, and partial replacement at the end of the century.

This chapter will first look at the various innovations and developments made by the Pullman Company in Pullman, Illinois. To give away the conclusion before we start, the truth is that the town itself was much more innovative than the manufacturing facilities. The second section will look at the biographies of the major architects and engineers who built the town and factory. Again, more attention will be paid to the former than the latter, partially because we know less about the engineers who built the factory itself. The final section will then look at the larger social implications of the "Pullman Experience" in terms of technological systems.

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[522] "The Pullman Exhibit at Chicago," 737.

[523] Grandin, *A Parisienne in Chicago: Impressions of the World's Columbian Exposition*, 119.

5.A Summaries of Innovations and Developments

5.A.1 Town and Factory Infrastructure

Despite the longevity and importance of the Town of Pullman, surprisingly few original plans survive. Partially this seems to be because much of the town was built in a sense on the fly and it seems that in some cases only broad, general plans were drawn up. When George Pullman retained S.S. Beman and N.F. Barrett to design the town's buildings and landscape, respectively, their initial discussions were apparently so remarkably grand that the men took them as "magnificent ideas" but thought that they were "the chimera[s] of a fevered brain." When Pullman then returned to New York some time later, asking to see the plans, Beman,

> pleaded a previous engagement and asked if the next morning would answer just as well, how, when he found that he was expected to deliver the plans, he worked straight through the night making an outline of the ideas which he had thought were merely delirious dreams; and how, when the sketch was presented the next morning, it was found to be faithful delineations of the 'dreams', requiring but a few changes. After these were made, the plans were approved and Messrs. Beman and Barrett were commissioned to work them out in detail, not only on paper, but on the shore of Lake Calumet.[524]

Irving K. Pond, the assistant draftsman to the lead architect, Solon S. Beman, reminisced that they wanted him not only as a draftsman and designer so that the project could move more quickly, but also because they were using mostly railcar draftsmen to do the initial planning for the whole town, not only the factory. They needed someone who understood buildings, not boxcars.

Pond arrived at an office where Beman was making elevations, but then discovered that there were no structural engineers to do things like figure out what size roof trusses would be needed for the designs. Pond half volunteered and was promptly appointed "head designer of the structural engineering force," and together they went to work. Pond further explained what a circus the first year's construction was:

> Although our force was augmented from time to time[,] the work, seemingly, was ever one jump ahead of the Architect. Plans for all the buildings were finished sooner or later but in one or two instances, not until after the building had been completed and occupied. … I laid out and detailed full size trusses and other items of construction on the broad floor of the shop or church or theater or other structure—generally from sketches worked up the office. As head draughtsman I was in demand all over the "lot". The carpenters would be calling from here, the bricklayers and stonemasons, there! Many a time the proposition put to me was beyond my knowledge and experience and then I bluffed for time—I had a hurry up call from another quarter and I would see them in the afternoon or next morning! But when I did see them, as you maybe sure I always did, I had it at my tongues end [*i.e.*, the answer was "on the tip of his tongue" as we

[524] John McLean, *One Hundred Years in Illinois, 1818-1918; an Account of the Development of Illinois in the First Century of Her Statehood* (Chicago: Peterson linotyping company, 1919), 225.

would say] or on my fingertips the correct solution of the problem. This process cost me many a sleepless night…[525]

Nonetheless, the factory town of Pullman rose on the shores of Lake Calumet in a remarkably fast progression.

The Industrial Center

From a point of view of innovations in the industrial half of the endeavor, it is hard to discern anything strikingly new that was developed at the factory. Pullman seems to have adopted the best practices for 1880, but then built them out on a massive scale. The huge transfer table (nearly 700 feet long) behind the main range of erecting shops, as well as the second, slightly shorter transfer table to the east of the middle row of shops were not themselves innovative. Transfer tables had been used before as early as the 1860s,[526] and Pullman's Detroit shops, built by a previous car-building firm in the 1870s, used one between their two main buildings (Figure 3.14). But the transfer tables at Pullman may well have been the largest in the world at the time. In the same vein, when it came to install a power source for the factory, Pullman went all out again, buying the massive 1876 Corliss engine that had been displayed at the Philadelphia Centennial Exposition.[527] Not strictly novel, but strikingly grand.

Perhaps the most interesting feature of the Pullman factory complex was the large fan-shaped track sidings that allowed considerable switching room for incoming trains full of materials as well as outgoing finished passenger and freight cars from his factory. In effect, by building his factory on an open, empty prairie, Pullman (or this case, Max Hjortsberg; see Section 5.B.3) had succeeded in merging a car manufacturing facility with the railway switching yard. Existing car builders in 1880 were almost all in dense, urban settings, severely limited in their expansion possibilities and maneuvering room on their own properties. It is notable for example that of the factory core between the Illinois Central railway tracks and Lake Calumet between 108th and 111th St., roughly half of that available land space on the eastern side was reserved for wood storage. Since there was no saw mill on the property, this allowed Pullman to bring train cars of lumber directly from sawmills to be stacked and air dried for the year or more it took for the wood to be ready for use. They also had a small kiln for final drying of, presumably, fine cabinetry woods where stability was paramount.

The Town

The town, on the other hand, was almost entirely revolutionary, at least in America. As previously discussed in greater detail in Chapter 4, Pullman envisaged what would now be called an industrial welfare city. The basic philosophy was that a happy worker is a good worker, and that moral rectitude and solid middle-class values could themselves be inculcated in the workers merely by providing them with the proper environment in which to live and work.

The town layout itself was not particularly innovative. It used a strict grid system, segregated the higher-class lodgings south of the factory from the less-higher-class lodgings to the north (Pullman of course

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[525] Pond, *The Autobiography of Irving K. Pond: The Sons of Mary and Elihu*, 83-86.

[526] "Railroad Extension," *New York Times*, 2 Oct. 1864.

[527] Dian O. Belanger, "The Corliss at Pullman," *Technology and Culture* 25, no. 1 (1984).

had no lower-class or tenement housing). It did however import some of the best practices in terms of mercantile shops, educational opportunities, and recreational facilities for the workers/residents, all in accordance with Pullman's industrial welfare philosophy. Europeans looking at the experiment would have seen it as a socialistic endeavor, though that term was in flux in America at the time Pullman was developed: earlier Fourierist social utopias having run their course and a more Marxist style socialism that was to inspire unionism struggling to be heard.[528] George Pullman himself seems to have subscribed more to the older style of paternalistic welfare, but without its communitarian aspects. Rather, he followed a form of Weberian capitalism that believed in "industrial paternalism," which to some observers (then and now) seemed more like neo-feudalism than enlightened philanthropy.

Pullman is, nonetheless, an extremely important and early case study in what has been termed welfare capitalism and what would become known in the early twentieth century as an experiment in "industrial welfare."[529] It is a truly model city from the point of view of having been planned from the ground up—or indeed, from below the ground up, in that drainage and sewage was planned before the streets were laid—and for being one which was run as a collective whole by the Pullman Land Corporation. The idea of the landlord was of course not new, but to have one corporation own the land, the church, the school, shopping arcade, recreational facilities, and of course the houses which the workers were not allowed to purchase, moved beyond the American experience.[530]

5.B Biographical Analyses of Lead Architects, Engineers, and Artisans

Pullman was the creation of George M. Pullman, to be sure, but it was to skilled technicians and planners to whom he turned to make his overall concept a reality. It is unfortunate that we have no enunciation of his vision in the late 1870s that would allow us to understand how the designers turned it into pavement, bricks, and rails. The other notable feature for the whole affair was that his lead architect, landscape architect, and sanitary engineer were all at the very early part of their career, and in some cases their careers were made on the fame of Pullman city.

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[528] Seymour Martin Lipset and Gary Marks, *It Didn't Happen Here: Why Socialism Failed in the United States* (New York: W.W. Norton & Co., 2000); John Nichols, *The "S" Word: A Short History of an American Tradition ... Socialism* (2015).

[529] Stuart D. Brandes, *American Welfare Capitalism, 1880-1940* (Chicago: University of Chicago Press, 1984); Andrea Tone, *The Business of Benevolence: Industrial Paternalism in Progressive America* (Ithaca, NY: Cornell University Press, 1997). Interestingly, Pullman does not appear in the latter important study, probably because, in the period of her attention, the Pullman company had had to divest of the town of Pullman. The British model is particularly well studied: Robert Fitzgerald, *British Labour and Industrial Welfare, 1846-1939* (London and New York: Croom Helm, 1988); Derek Fraser, *The Evolution of the British Welfare State: A History of Social Policy since the Industrial Revolution* (2017).

[530] It is worthwhile noting that Pullman did not plan to set out an area of land he purchased north of the town (in what is now the Cottage Heights neighborhood) where workers would be allowed to purchase their homes. He did not get far on this scheme before the 1894 strike forced him to divest of all the houses.

George Pullman hired more experienced railroad men for the factory portion of the development, and in that we have yet to identify much that is truly novel in the early years in terms of technological processes and systems. If anything, the factory at Pullman might best be seen as a distillation of best practices in railroad car building in 1880, built on a mammoth scale. Further work in railroad trade magazines of the day is encouraged to flesh out that story. Pullman partly set the standard, but has perhaps been understudied for having been so (rightly) overshadowed by the novelty of the whole town system of industrial welfare.

5.B.1 Solon Spencer Beman (1853–1914)

Callout: Archival holdings for S.S Beman

- **Solon S. and Spencer S. Bean Collection**: The Ryerson and Burnham Archives, Ryerson and Burnham Libraries, The Art Institute of Chicago, 111 S. Michigan Ave. Chicago, IL 60603-6110. Acc. 'Beman': Clippings and Drawings: 0.5 linear foot (1 box), 3 portfolios, 5 oversize portfolios, flat file materials, and 1 rolled tube.
  See also the original drawings in the department of architecture at the Art Institute:
- **George M. Pullman files, 1867-1897**: The Newberry Library, 60 West Walton Street, Chicago, Illinois, 60610. Includes correspondence with Beman on Pullman's residence.
- **Beman Design Scrapbook:** Chicago History Museum, 1601 N Clark St, Chicago, IL 60614: Scrapbook of architectural designs, plans and details mostly executed by Solon Spencer Beman, 1853-1914.
- **Pioneer Press building collection 1888-1890**: 0.5 cu.ft.; **Pioneer and Endicott buildings collection, 1888-1890**: 6 linear ft. of drawings and plans: University of Minnesota - Twin Cities.
- **St. Paul Dispatch-Pioneer Press Records, 1862-2001 (bulk 1862-1948):** Minnesota Historical Society, 345 W. Kellogg Blvd., St. Paul, MN 55102. Acc. Accession number: 1780D15; 3539; 5471; 7426; 7838; 8417; 9405; 15,643, 1.7 cubic feet (2 boxes), Includes materials relating to the construction of the Pioneer Press Building in downtown St. Paul (1888-1890).
- Further research on Beman's early training may be rewarded by searching the AIA Archives at the New York Public Library, **Richard Upjohn and Richard Michell Upjohn papers, 1839-1914**: acc. MssCol 3115, 5.2 lin. ft.

Originally from Brooklyn, Solon Spencer Beman studied under Richard M. Upjohn (1828–1903)[531] of New York City from 1867–77. He had notably been tasked with work for the Connecticut State Capitol Building in Hartford for two of the last of these years before he opened his own practice in New York in 1877 in partnership with the landscape architect Nathan F. Barrett (see below). Barrett had recently been hired by Pullman to landscape his Fairlawn estate in Long Branch, New Jersey and when Pullman asked Barrett for a recommendation for an architect to remodel his Prairie Ave. mansion in Chicago,

[531] Born in England and emigrated to the U.S. in 1828, Upjohn became noted for Gothic Revival churches and designed the Connecticut State House in 1871–78. His architect father, Richard Upjohn (1802–1878) was also noted for his Gothic revival churches across the Northeast and was a founding member (along with his son) and first president of the American Institute of Architects. Everard M. Upjohn, *Richard Upjohn: Architect and Churchman* (New York: Da Capo Press, 1968); Lamia Doumato, *Richard Upjohn, Richard Michell Upjohn and the Gothic Revival in America* (Monticello, IL: Vance, 1984).

Barrett recommended Beman. Satisfied with Beman's work and despite his relative lack of experience or prominence, Pullman asked Beman to work up designs for his new factories, even though this was entirely outside his previous experience (to be fair, few formally trained architects of this time would have had that kind of experience). Buder reports that in November 1879, Beman visited Pullman's Detroit shops and "several [other] car shops" between Detroit and New York. We might surmise that these could have included notable shops in Wilmington, Delaware and Buffalo, New York, but it is unknown which one specifically he visited. From this brief exposure he worked up designs for the factories (and probably the entire town, at least in scope) by the end of the year.[532] Between 1880 and 1883 Beman and Barrett transformed an empty plain into a set of industrial and residential spaces, with a modest amount of civic and commercial space tightly nestled at the core of the planned community. On the latter point, one is struck today by how little commercial space there was for markets and shops, especially considering that the market square took a number of years to complete. From 1880 to 1891 (though he had also set up in private practice in 1884), Beman also oversaw the buildout of the southern town between 111th and 115th Sts., as well as of the northern section of Pullman between 103rd and 106th Sts.

In 1882, at age 29, Beman married Agnes Smith, three years his junior, in Chicago.[533] They had something of a personal setback in 1903 when his home on E. 49th St., which he had himself designed in 1892, suffered a fire to a loss of $25,000.[534]

Little detail is known about how Beman approached the project or the parameters that Pullman set for him. Pond claims that the overall plan of the town had been determined by 1879 and that Beman was assisted by the "car draughtsman," presumably T.A. Bissell, and he also must have spoken with him back in Detroit for the engineering requirements of the shops. We also know that Beman was briefly assisted at the outset by Will J. Dodd, later a prominent architect in Louisville and Los Angeles and a former apprentice under William LeBaron Jenney, one of the leading Chicago architects of the day. After Dodd left, Beman hired Pond, who had also taken classes from Jenney at the University of Michigan. Pond further claimed that from 1880–81 the whole design and build process was rather haphazard, with the design "ever one jump ahead of the Architect."[535] It is also known that Beman employed the young architects James H. Marling, Frederick R. Shock, Morris G. Holmes, and James Oliver Hogg at various

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[532] Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 50-51.

[533] "Suburban. Pullman," *Chicago Tribune*, Nov. 29 1882. The marriage was, incidentally, a double wedding with Beman's sister, Jennie (age 22), who married Dr. John C. Cook (age 26) of Pullman. Jeannie went on to become a noted artist and sculptor (as Jean Beman Cook-Smith) and Cook was a pediatrician and founder of the Chicago Pediatric Society (a small selection of his papers are at the American Academy of Pediatrics Pediatric History Center, now the Gartner Pediatric History Center, in Itasca, IL). See "Suburban. Pullman.," *Chicago Tribune*, Nov. 29 1882.

[534] "Girl Phone Fire Alarm While Smoke Fills House," *Chicago Daily Tribune*, Feb. 3 1903.

[535] Pond, *The Autobiography of Irving K. Pond: The Sons of Mary and Elihu*, 83.

times.[536] An amusing joke was later told that when Beman hoped for some name recognition for his work on the model town, he approached George Pullman on the matter. Pullman was quite happy to oblige and proposed that the new town bear the first syllable of his name, 'Pull', and the second syllable of Beman's name, 'man', … and thus "Pull-man"[537]

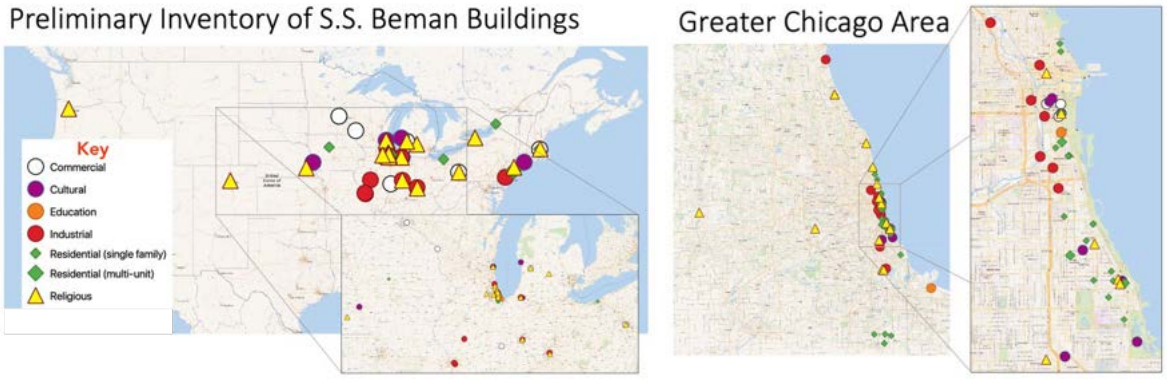

Figure 5.1. Preliminary Inventory of Buildings by Solon S. Beman.

Beman's work at Pullman catapulted him into the regional spotlight as a leading architect in Chicago. His notable commissions for individual commercial buildings include the Pullman office building (1884), Grand Central Station (1890), and the Studebaker building on Michigan Avenue in Chicago (1885 and 1889; later the Fine Arts Building) as well as the Studebaker's factory in South Bend, Indiana (1905–06) and the Pabst office building in Milwaukee (1891; demolished 1980). Beman's fame for designing the industrial complex of Pullman translated into numerous commissions for factory buildings, warehouses, and one power house in Garfield Park, IL. It also placed him in the ranks of high-demand architects for train stations and depots, and he designed at least four for different railroads in Chicago between 1887 and 1895, including Chicago's Grand Central Station at Wells and Harrison in 1888 (Figure 5.2).[538]

The industrial project that most related to Pullman was his commission for the company town of Ivorydale, Ohio for Procter and Gamble (1883–88), which grew to encompass sixty-seven acres, over

[536] Ibid., 82–88 and quote on 86. James H. Marling (1857-1895; Pond misremembered his name as "W.H. Marling") was a Toronto native and employee of Joseph Lyman Silsbee in Syracuse and later his partner in Buffalo from 1882–87; and half of the firm Marling & Burdett from 1887–91 with Herbert Channing Burdett who had trained under H.R. Richardson in Boston. Shock and Holmes were minor Chicago architects. Hogg was born in Madison, WI in 1859, studied with Prof. M.C. Rickes at the University of Illinois and later became part of the noted Hogg & Rose firm in Kansas City from 1886–94.

[537] "Pullman's Little Joke," *The Morning Call*, Nov. 8 1911.

[538] Pond, *The Autobiography of Irving K. Pond: The Sons of Mary and Elihu*, 123-32.

two dozen factory buildings, and ultimately housing for 1,500 workers.[539] The Ivorydale project was guided by the experience at Pullman, and occurred immediately in its wake, but notably did *not* include the worker housing as part of Procter & Gamble's vision.[540] Nonetheless, it was within a few years expressly compared to it: "Perhaps no other village in this country, except Pullman, Illinois, can compare with it as an example of what a manufacturing village should be. A genuine attempt has been made to apply the principles of art to its construction and to beautify the daily surroundings of its people."[541] The experiment, guided by a more limited industrial vision of William Cooper Procter, was less paternalistic than that of George Pullman. [542]

At Ivorydale Beman once again indulged his eclectic (or perhaps undisciplined) architectural aesthetic,[543] though this same commentator seemed to appreciate it: the "work at Ivorydale [gained] all the benefit of [Beman's] experience gained in constructing the model manufacturing village [in] Illinois. The result of his labor ought to satisfy the aesthetic taste even of the fastidious. Ruskin himself could hardly be displeased with it." The main factory buildings were 300 foot long, four-story rectangular affairs with monitor roofs. They had white river stone walls and red sandstone arched window and door lintels with denticulated jambs (the Victorian eclecticism

[539] "Buildings and Builders. Out of Chicago. Cincinnati's Pullman," *The Daily Inter Ocean*, July 11 1885. The P&G archives in Cincinnati unfortunately do not have any correspondence with Beman. Pers. comm. Greg McCoy, Proctor & Gamble Corporate Archives, Dec. 12, 2018.

[540] Buder, *Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930*, 132-33.

[541] I.W. Howerith, "Profit Sharing at Ivorydale," *American Journal of Sociology* 2, no. 1 (1896): 43–44.

[542] Proctor was in fact relatively progressive in that when faced with a strike by the Knights of Labor: he instituted a half day of work on Saturdays and instituted a very successful profit-sharing system for workers in 1887 and eventually gave them one seat on the board of directors in 1919. "The Procter and Gamble Company Ivorydale, Ohio," in *Executive Guidance of Industrial Relations: An Analysis of the Experience of Twenty-Five Companies*, ed. C. Canby Balderston (Philadelphia: University of Pennsylvania Press, 1935).

[543] Robert M Lillibridge, "Pullman: Town Development in the Era of Eclecticism," *Journal of the Society of Architectural Historians* 12, no. 3 (1953).

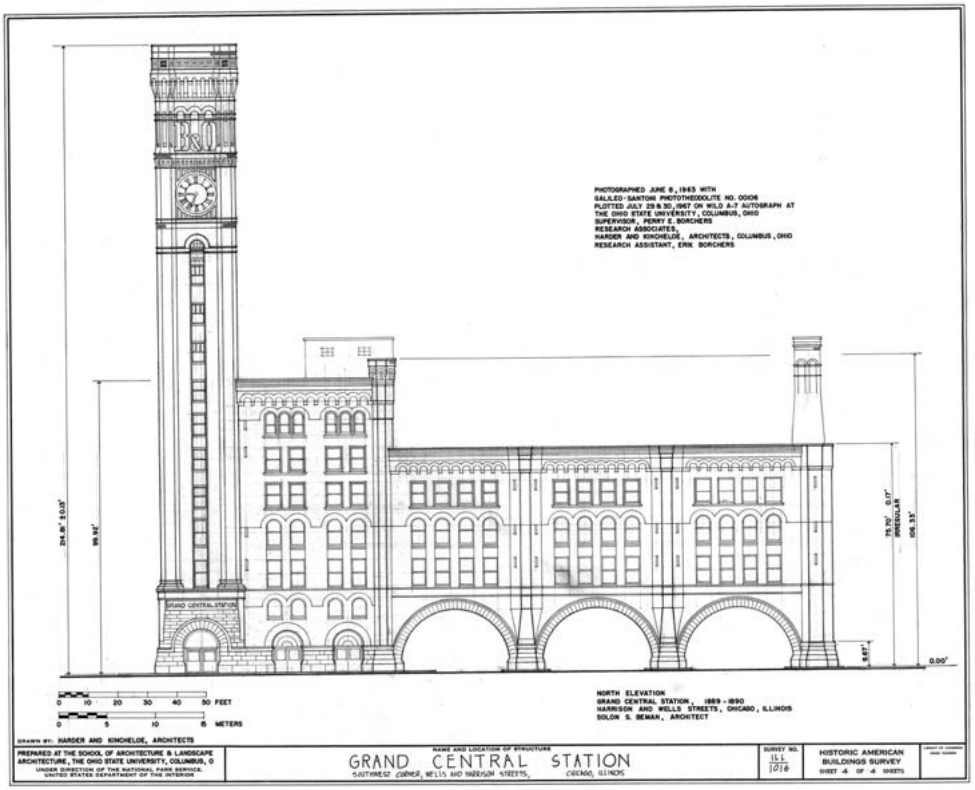

Figure 5.2. Grand Central Station, Harrison & Wells, Chicago. Opened 1890; Demolished 1971. Photo: Library of Congress, Prints & Photographs Division, ILL,16-CHIG,18- (sheet 4 of 4).

manifest in that fact that the sills were *not* of sandstone strikes the modern eye as strange). Another building in the complex was of the same massing, but made of red brick with notable white banding that jumps up and over the windows and doors. The gatehouse lodge was fully rusticated limestone.

In the great fervor surrounding the World's Columbian Exposition of 1893, architects from Chicago and all around the country vied for a commission. Beman had been part of the original planning committee in January 1891 and was one of the five local firms that served on the grounds and buildings committee, along with Burling & Whitehouse, Jenney & Mundie, Henry Ives Cobb, and Adler & Sullivan, as well as three firms from New York, one from Boston, and one from Kansas City.[544] He was selected as the architect of two buildings at Exposition: The Mines and Mining Building and the Merchant Tailors Building. The former used grand Roman motifs including coffered vaults, triumphal pediments, and internal columnated exterior arcades (although the inside central gallery was supported on a more modern iron column and lattice truss system with flattened segmental arches) and ornamented with distinctly Renaissance revival frieze and spandrel infill and escutcheons flanking the main entrances. Merchant Tailor's was a much smaller, simpler building, costing only $30,000 modeled after the Villa

[544] Rossiter Johnson, *A History of the World's Columbian Exposition Held in Chicago in 1893* (New York: D. Appleton and Co., 1897), 44, 136, 429.

Rotunda of Palladio and with simple details much like the White House in Washington, with a notable Ionic porch and steps leading down to the north Lagoon.[545]

Beman also apparently drew up the plans for a grand entertainment pavilion with a "monster new auditorium," lake pier, and summer resort hotel that was to have been built between 23rd and 25th St. in Chicago (just south of the modern McCormick Place, where I-55 terminates at the lakefront), though the scheme seems to have foundered.[546] He did, however, provide the plans for both the first and second (after the first burned). Beman would also later win the commission for the Manufactures Building at the Trans-Mississippi Exposition in Omaha, Nebraska in 1897.

Between 1887 and 1893 Beman designed churches for numerous denominations: Methodist, Lutheran, Roman Catholic, Jewish, and a memorial all-denomination church in Pullman itself. But after about 1895, Christian Science, which had been founded in Boston in 1875 but which was just at that moment seeing a rapid expansion across the country, took on Beman as the chief theorist of their church architecture. This he took on "as more than a matter of technic… [but] a matter of social psychology."[547] He designed all his Christian Scientist churches in the classical style that came to the fore in American architecture after the Columbian Exposition. Beman saw this style to be in sympathy with the tenets of the religion because of "its sense of calm power and dignity, and with its true systems of proportion, its sincerity and refinement, and … its rationalism."[548]

In 1896 Beman received the commission for the First Church Scientist in Chicago on Drexel Blvd. between 40th and 41st St. There he built the then-largest Protestant church in America for the approximately 5,000 Christian Science members in the city who collectively spent $100,000 on the church. The edifice was decidedly Grecian in appearance, with three fluted Ionic columns in a square opening surmounted by a simple triangular pediment strongly reminiscent of the Parthenon with a central apex fan ornament and cornice *acroterions*, though with a blank tympanum, no frieze, and an instruction field in the architrave more in sympathy with monumental Roman architecture. The interior was an open-span square cross space, for as he noted, "services are very simple in their character,

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[545] Karen Vendi and Mark Vendi, "The Mines and Mining Building of the World's Columbian Exposition, 1893: A Photographic Essay," *Mining History Journal* 8 (2001). Beman also built a scale model of St. Peter's Basilica for the Exposition; Johnson, *A History of the World's Columbian Exposition Held in Chicago in 1893*, 175.

[546] "To Extend Drive," *The Inter Ocean*, Oct. 23 1898.

[547] Solon S. Beman, "The Architecture of the Christian Science Church," *The World To-day* 12, no. 6 (1907). And see Paul Eli Ivey, "Christian Science Architecture in the American City: The Triumph of the Classical Style," in *Faith in the Market: Religion and the Rise of Urban Commercial Culture*, ed. John M. Giggie and Diane Winston (New Brunswick, NJ: Rutgers University Press, 2002), 124–25; *Prayers in Stone: Christian Science Architecture in the United States, 1894-1930* (Urbana: University of Illinois Press, 1999); Paul Ivey, "American Christian Science Architecture and Its Influence," Mary Baker Eddy Library, http://marybakereddylibrary.org/research/american-christian-science-architecture-and-its-influence.

[548] Beman, "The Architecture of the Christian Science Church."

without ritual, and consist of readings from the Bible and the Christian Science text book on Sundays and the testimony meetings during the week." Thus, "readers should be heard from all parts of the auditorium, and it is also desirable, but not particularly necessary, that a full view of the readers' platform be had from any point." Further, "at the testimony meetings during the week many people address the audiences from all parts of the room and being for the most part unaccustomed to public speaking, it is imperative that the acoustic properties of the audience room be as nearly perfect as possible."[549] This classical auditorium nave, coupled with the characteristic feature of these churches of having a larger-than-usual foyer which also served as a social meeting room that could accommodate up to 70% of the congregation, became the template for a great many Christian Science churches across the country.

After this initial commission, Beman and his second wife became converts to that new sect in 1903, perhaps stemming "from a desire to express appreciation for the church's purported cure of Solon's wife [Agnes], who was an invalid." Ultimately, he built another nineteen churches for the Church: five more in Chicago proper and others in Evanston, Highland Park, La Grange, and in South Bend, Indiana, and then across the country in Cincinnati, Denver, Grand Rapids, Indianapolis, Lansing, Lincoln, Nebraska, Milwaukee, New York City, Pittsburgh, and Portland, Oregon. His architect son, Spencer Solon Beman, continued the practice and between them, they were ultimately responsible for at least ninety Christian Scientist churches across the country.[550]

Architecturally, Beman worked across many styles in his career.[551] His Pullman plans are generally in the Victorian picturesque style with both Romanesque and gothic elements, accented with northern European touches, notably the many gables and turrets on more important buildings. He took these elements to a height in his private house designs. He was also hired by 1892 as the aesthetic interior designer for Pullman coaches with an annual retainer of $5,000.[552] After the World's Fair in Chicago he added classical motifs and forms to his repertoire, and modest Richardsonian Romanesque influences are in evidence as well, as for example in his 1885 Northwestern Insurance Co. Building in Milwaukee. This was perhaps also pushed further along by having lost out on the design of the J.J. Glessner House in Hyde Park to Richardson himself in 1887.Beman died in 1914 in Chicago and his son carried on the practice.

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[549] Ibid., 588–89.

[550] Jan Olive Full, "City of Mcgregor, Clayton County, Iowa, Planning for Preservation Project," (Iowa City, IA: McGregor Historic Preservation Commission, 2011-12).

[551] No full biography of Beman's life and work has been written, but see Caryn Hannan, Jennifer L. Herman, and Bryan Dye, *Illinois Biographical Dictionary* (Hamburg, MI: State History Publications, 2008), 44–45; Historical Publishing Company, *Origin, Growth, and Usefulness of the Chicago Board of Trade* (New York: Historical Pub. Co., 1885-68), 127; Charles Gregersen, "List of Buildings and Projects by Solon Spenser Beman," *The Chicago Architectural Journal* 5 (1985). Gregersen was apparently working on a biography in the 80s, but it never appeared.

[552] White, *The American Railroad Passenger Car Part 1*, 441.

5.B.2 Irving Kane Pond (1857-1939)

Callout: Archival holdings for Irving K. Pond

- **Pond and Pond collection**, ca. 1895-1938, acc. no. 2001.1, Art Institute of Chicago, Ryerson & Burnham Libraries, Chicago, IL 60603.
- **Pond Family Papers**, 1841-1939, call no. 852090 Aa 2, Bentley Historical Library, 1150 Beal Ave., Ann Arbor, MI 48109-2113. 9.6 lin. ft., 2 oversize drawers, 1 microfilm.
- **Irving Kane Pond Papers**, American Academy of Arts and Letters, 633 West 155th St., New York, NY 10032.

Figure 5.3. Irving K. Pond, from Chicago Tribune*, Jan. 4, 1910, p. 4.*

I.K. Pond (Figure 5.3) was a graduate of the University of Michigan (Class of 1879) and became a noted architect and architectural critic in Chicago (and apparently quite a wag, circus aficionado, and a lifelong acrobat).[553] Pond arrived in Chicago after graduating with his architectural degree with no job but a

[553] "Pond, Irving Kane," *American National Biography* 17 (1999); Guy Szuberla, "Irving K. Pond: The Making of a Chicago Architect," *Midwestern Miscellany* 39 (2011); Pond, *The Autobiography of Irving K. Pond: The Sons of Mary and Elihu*, esp. 881–91 for his involvement with Pullman. The *Wikipedia* article on Pond is also unusually complete. Pond's principle architectural thoughts are in "The Life of Architecture," *Architectural Record* (1905); *The Meaning of Architecture; an Essay in Constructive Criticism* (Boston: Marshall Jones Company, 1918); "Towards an American Architecture," in *Living Architecture; a Discussion of Present Day Problems*, ed. Arthur Woltersdorf and Chicago Chapter of the American Institute of Architects (Chicago: A. Krock, 1930). See also, *e.g.*: "Art and Individuality: Part I," *Art and Progress* 2, no. 11 (1911); "Art and Individuality: Part Ii," *Art and Progress* 2, no. 12

letter of introduction to the noted Chicago architect William LeBaron Jenney. Jenney could not offer him much work, but let him use a desk while he shopped himself around. It took nine months, but he was eventually hired as assistant to Solon S. Beman for the design of Pullman. Beman had in fact sent for Pond's roommate, Clarence Arey, also like Pond a former student of Jenney at Michigan (Class of 1878, but Arey had just taken another position. Pond rose quickly and by 1883 while acting as general superintendent and draftsman under Beman at Pullman, Beman offered him a partnership.

Rather than take that partnership, Pond instead went on the grand tour of Europe for three months in the fall of 1883 in order to study the architecture of both southern and northern Europe. He parlayed the trip into, among other things, a series of articles in the *Inland Architect and News Record* on regional architectural styles.[554] Pond was one of the principal officers of the Architectural Sketch Club in Chicago, on the founding committee of the municipal art league of the city, and became a visible regional architect from 1886 through partnership with his brother, Allen B. Pond, trading as Pond & Pond until his brother's death in 1929 and then solo until his own retirement, at age 79, in 1936.

Pond designed over 300 buildings in his career, from the Ladies Library Assn. building in Ann Arbor, Michigan, to numerous student unions (notably at Purdue, the University of Michigan, Michigan State, and the University of Kansas) which "promoted democracy and an uplifting idealism." He also designed churches and social buildings in the well-to-do and progressive/modern vacation areas around Chicago, and he developed many residential properties in Chicago.[555] His most famous connections were to progressive causes of the age: the Hull-House settlement house complex (1889-1909) at Halstead and Polk for the pioneer social worker Jane Addams, the City Club (1910) and other club houses, and as a founder of the Eagle's Nest Art Colony (1898) near Oregon, Illinois.[556] Pond & Pond generally worked in the Arts and Crafts style and Irving is known for having coined the term "Prairie School" for the modern style that developed in Chicago and the Midwest. He circulated among the Chicago School of Architects (including Louis B. Sullivan and Frank Lloyd Wright), though later denied that he was part of it.

(1911); "Eliel Saarinen and His Work; a Word of Appreciation and Greeting," *The Western Architect* 32, no. 7 (1923); "High Buildings and Beauty," *Architectural Forum* 38 (1923). On his extra-architectural interests, see: *A Day under the Big Top, a Study in Life and Art* (Chicago: Chicago literary club, 1924); *A Strange Fellow, and Other Club Papers* (New York and Chicago: Priv. Print. by Willett, Clark and Co., 1938); *Big Top Rhythms: A Study in Life and Art* (Chicago and New York: Willett, Clark and Co., 1937). and *A Day under the Big Top, a Study in Life and Art*; "Stiff Joints a Key to Man's Age," *Chicago Tribune*, Aug. 30 1927; *A Strange Fellow, and Other Club Papers*.

[554] "Real Estate and Rents. Other Personals," *The Inter Ocean*, Aug. 19 1883.

[555] "Buildings and Builders. Out of Chicago. Here and There," *The Daily Inter Ocean*, July 11 1885. For a selected list of his designs, see Pond, *The Autobiography of Irving K. Pond: The Sons of Mary and Elihu*, 461–67. and the entry for "Pond and Pond" on Wikipedia.

[556] Guy Szuberla, "Three Chicago Settlements: Their Architectural Form and Social Meaning," *Illinois State Historical Society Journal* 70 (1977). Irving's brother and business partner also wrote a relevant article: Allen Pond, "The Settlement House," *The Brickbuilder* 11, no. 7 (1902).

By the 1890s, Pond was a visible public lecturer in the upper Midwest on architecture and art aesthetics. He also did the design for the new title page of the *Inland Architect* in 1892. In 1910 he was elected president of the American Institute of Architects, the first man from beyond the East Coast to hold that honor. From that position in New York, he looked back with less enthusiasm for what Chicago architecture had become and Chicago architects accused him of becoming "too radical" from having moved east.[557] Apparently there were no hard feelings, as within months he was hired by a consortium of musicians who were planning a twenty-story soundproof building in Chicago, and he felt quite at home continuing to criticize various projects in Chicago.[558] He spent the next two decades developing designs for the "modern" style of architecture that was taking shape in Chicago, though he seems to have been largely demoted from the canon since his death.

5. B.3 Maximillian Hjortsberg (1825-1880)

Callout: Archival holdings for Max Hjortsberg

- **Burlington, & Quincy Railroad Archives**: The Newberry Library, 60 West Walton Street, Chicago, Illinois, 60610: Chicago. Acc. CB&Q, 2,341.6 linear feet.
- *See also* **Burlington Route Historical Society**, Lake States Facility, Baraboo, WI, http://www.burlingtonroute.com (includes flatfile materials acquired from the Newberry Library)

Described as "an agreeable young man," "a dashing man who chomped cigar after cigar on deck during a storm off South Carolina," and later as a famous Swedish-American, Max Hjortsberg was responsible for the initial layout of the trackage and perhaps parts of the shops at Pullman. He was born in about 1820 to Lars Hjortsberg, "a learned and highly cultivated man," who sent him to the University of Uppsala and then to the Polytechnic School in Stockholm for engineering training. Graduating in 1844, Hjortsberg moved to London where he worked at various times for the next six years for noted English engineers Charles Cheffins, C.H. Wild, and John Fowler, the men behind the explosive mid-century growth of the British rail system. In 1850 he made the grand tour of America and Canada, arriving in America with his cousin and the most famous songstress of his home country, the "Swedish Nightingale," Jenny Lind, on the steamship *Atlantic* out of Liverpool as she began her 1850-1852 American tour backed by P.T. Barnum.[559] After a brief return to Sweden, he emigrated to the U.S. in 1852.

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[557] "Chicago Plan to Architects," *Chicago Tribune*, Dec. 13 1909; "Architects Plan to Honor Chief," *Chicago Tribune*, Jan. 4 1910; "I. K. Pond Criticizes Chicago Architecture," *Chicago Tribune*, May 19 1911; "Architects See Chicago O.K.," *Chicago Tribune*, May 20 1911.

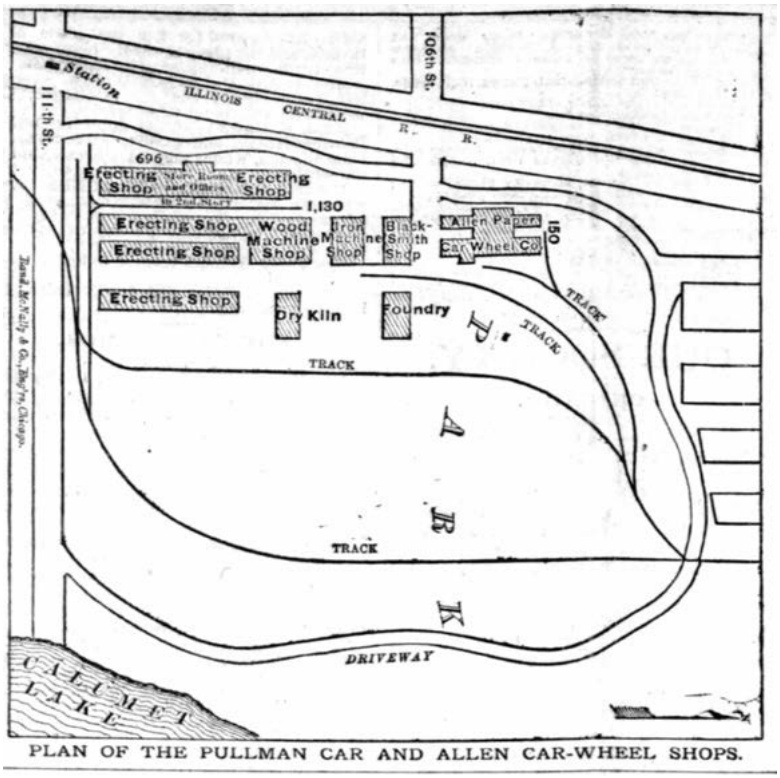
[558] "Plan Building without Noise," *Chicago Tribune*, June 14 1911; "Architects Criticize Union Station Plans," *The Inter Ocean*, June 7 1913.

[559] See Sir Julius Benedict, "Jenny Lind," *The Century Illustrated Monthly Magazine*1881, 128; Nils William Olsson and Erik Wikén, *Swedish Passenger Arrivals in the United States 1820–1850* (Stockholm: Kungliga Biblioteket, 1995), 122; Fredrika Bremer, *The Homes of the New World: Impressions of America* (London: A. Hall, Virtue & Company, 1853), 3: 61; Philo Adams Otis, *The First*

Hjortsberg spent five years working at various railways in the upper Midwest. In 1857 he joined the Chicago, Burlington, and Quincy (CB&Q) Railroad and quickly rose to become their chief engineer. His studies of the riverbed geology and the water current and potential for scour contributed to the successful construction of the Burlington Bridge in Iowa, the first all-iron bridge across the Mississippi, just after the Civil War.[560] He stayed with the CB&Q, though with some external consulting, until 1879 when he joined Pullman to design his new model town south of Chicago.

Presbyterian Church, 1833–1913: A History of the Oldest Organization in Chicago (Chicago: F. H. Revell Company, 1913), 63n1. Hjortsberg served as her secretary during her 1850 tour with P.T. Barnum; see "A Card," *The Evening Post*, June 3 1851. where Hjortsberg writes into the paper on her behalf (her NYT obituary calls him, as her secretary, “Max Jorkberg”; "Jenny Lind’s Triumphs," *New York Times*, Nov. 3 1887.; W. Porter Ware and Thaddeus Constantine Lockard, *P.T. Barnum Presents Jenny Lind: The American Tour of the Swedish Nightingale.* (Baton Rouge: Louisiana State University Press, 1980), 5–7 and 57.; Jay Elihu Greene, *Four Complete Biographies* (New York: Globe Book Company, 1962), 605. Hjortsberg acted as Lind’s local representative when she donated an elaborate altar service of chalice and plate worth $1,000 to Rev. Gustaf Elias Unonius for the construction of the first Swedish Episcopal church, St. Ansgarious, in Chicago (she had previously directly donated $1,500 to the building fund); Ernst W. Olson, Martin J. Engberg, and Anders Schˆn, *History of the Swedes of Illinois* (Chicago: Engberg Holmberg Publishing Company, 1908), 416.

[560] C.H. Hudson, "The Original Construction of the Burlington Bridge in 1867–68," *Journal of the Association of Engineering Societies* 13, no. 5 (1894). Also see Hjortsberg to Capt. Charles J. Allen, US Corps of Engineers in “Navigation of the Mississippi River,” House of Representatives, 44th Congress, 2nd Session, Ex. Doc. 41 (1877), app. J, 40. The 9-span (some sources say 8-span), 2,185-foot-long Whipple through truss bridge was built by Detroit Bridge & Iron Works (Bridgehunter.com ID no. BH 70509). Hjortsberg also did the preliminary survey for the Kansas City Bridge in 1866; Octave Chanute and George Shattuck Morison, *The Kansas City Bridge: With an Account of the Regimen of the Missouri River, and a Description of Methods Used for Founding in That River* (New York: D. Van Nostrand, 1870), 14. In general, on the CB&Q, see William Wright Baldwin, *Chicago, Burlington & Quincy Railroad Company: Documentary History*, 3 vols. (Chicago: R.R. Donnelley & Sons, 1928–29).



PLAN OF THE PULLMAN CAR AND ALLEN CAR-WHEEL SHOPS.

Figure 5.4. Initial Plans for Factory Layout at Pullman. Chicago Tribune*, Apr. 25, 1880, p. 9.*

Hjortsberg was hired by Pullman to work out the practical details of the design of the railway layout in the overall plan by S.S. Beman (see Figure 5.4 for the initially reported plans of what we take to be his track layout; see also Figure 5.5), but in April 1880 he was struck by an Illinois Central passenger locomotive while walking the proposed site for the Pullman factory. Hjortsberg was thrown into the ditch with an arm and one leg both doubly-fractured. Although he seemed to be recovering well, a blood clot passed into his pulmonary artery and he died suddenly on May 16.[561]

Hjortsberg had married Alice Frances Hammond, the daughter of Col. Charles Goodrich Hammond, originally in charge of the freight department of the Michigan Central and then from 1855 to 1868 superintendent of the CB&Q.[562] Col. Hammond then superintended the Union Pacific from 1869 (just after the driving of the Golden Spike at Promontory Point, Utah that May) to early 1870, resigning for health reasons and to take up the vice-presidency of the Pullman Palace Car Co., a position he held until his death in 1884. It was likely he who brought Hjortsberg on board, or at least to the attention of

[561] "Max Hjortsberg," *The Inter Ocean*, May 20 1880; "Max Hjortsberg," *Chicago Tribune*, May 17 1880; "Personal Mention," *The Railway Age Monthly and Railway Service Magazine* 1, no. 6 (1880); "Notices," *The Railway Age Monthly and Railway Service Magazine* 1, no. 7 (1880); "Max Hjortsberg."

[562] Alfred Theodore Andreas, *History of Cook County Illinois: From the Earliest Period to the Present Time, Complete in One Volume* (Chicago: A. T. Andreas, 1884).

George Pullman, for the design of the new trackage to the new factory site in 1879, although Hjortsberg was already quite notable in Chicago and in railroad engineering circles by that time.

Instrumental in the Chicago section of the Western Society of Engineers and the beginnings of the Civil Engineer's Club of the Northwest, he was called in as an expert consultant on building projects, as when the new Chicago Music Hall was under construction and there was concern that the brick piers and party-walls were insufficient to carry the load. He was the superintendent for the construction of the New England Congregational Church, one of Chicago's "most beautiful churches," both before and after the great Chicago fire of 1871. From 1877 until his death he also served as commissioner of Lincoln Park in Chicago.[563] He held U.S. Patent no. 26,686 (January 3, 1860 with Moses W. Lester) for "Improvement in Apparatus for Heating and Ventilating Buildings," an interest he held much of his life. For the last half decade or so of his life, he was intermittently involved in developing the idea of steam or pressurized hot water heating for entire cities or districts thereof. Such plans may have been considered for Pullman, as he had laid a mile of a test system using 2½ -inch piping somewhere near Chicago, but Hjortsberg's sudden death cancelled that possibility.[564]

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[563] *American Architect and Building News* 6, no. 202 (Nov. 8, 1879): 145. *Proceedings of the Western Society of Engineers* 5 (1880): 167–168. *"Report of the Commissioners of Lincoln Park, from December 1, 1886, to January 1, 1893," (Chicago1893).* George S. Phillips, *Chicago and Her Churches* (Chicago: E. B. Myers & Chandler, 1868), 425–33.

[564] M. Arthur Achard, "On the Various Modes of Transmitting Power to a Distance," *Proceedings of the Institution of Mechanical Engineers* (1881): 96–97n†; Harry Olrick, "Transmission of Heat and Power," *Engineering* 31 (1881).

5.B.4 Thomas Ashley Bissell (1835-1902)

Callout: Archival holdings for T.A. Bissell

- *None located*.

Described by John H. White as "one of the masters of wooden passenger car construction," Thomas Bissell got his start on the railroad building bridges in the West and then joined the repair shops in Aurora, Illinois as a draftsman. In 1872, Pullman hired Bissell at his Detroit shops and Bissell effected a complete reorganization of those shops to make production more efficient. The success of that reorganization led to Bissell's promotion to chief mechanical superintendent, a position he held until 1881.[565] It seems logical, then, that Bissell would have been in charge of laying out the Pullman, IL shops or at least that those shops would have followed the Detroit plan in gross detail. A comparison of the footprints, however, shows that the Detroit shops were so constrained while the plain west of Lake Calumet offered such a blank canvas for the layout of the new Pullman shops that no comparison is possible. Undoubtedly the production methods developed in Detroit would have informed the internal material flows in Pullman, but comparisons are not instructive as they had so much more space to work with and freedom to expand (though it is notable that they still used multi-story shops in Illinois) and we do not have comprehensive machine-level interior layouts for either site.

Bissell left Pullman in 1881 to take up the superintendence of Barney & Smith Manufacturing Co. of Dayton, OH. Then, in August 1886, he became the chief mechanic of the Buffalo shops of the Wagner Sleeping Car Co., the chief competitor of Pullman. While there, he was instrumental in developing and patenting certain details of the mechanism for the vestibule that enclosed the space between cars to protect passengers while moving between them. Pullman had enjoyed a monopoly on the idea of the vestibule through the patents of his employees, Henry H. Sessions until 1892, when a Chicago court ruled his patents invalid and opened up the vestibule to all other lines across the country (see Section 3.B.4).[566] Bissell retired from the railways in 1895.

Throughout his career, Bissell was a member of the Master Car Builders' Association of Chicago[567] and an active developer of manufacturing techniques and equipment for railway passenger cars. He received numerous patents during his career.

T.A. Bissell Patents

221,278	Improvements in Car-Axle Boxes	Nov. 4, 1879
237,937	Transom Ventilator [with H.C. Hart]	Feb. 22, 1881
378,948	Head-Rest for Sleeping Cars	Mar. 6, 1888

[565] White, *The American Railroad Passenger Car Part 1*, 648.

[566] Ibid., 450–51.

[567] Though beyond the scope of this report, work in the considerable number of publications issued by the MCBA would repay the diligent research of railroad passenger cars. See the WorldCat identity authority record at http://worldcat.org/identities/lccn-no2002017102/.

387,812	Die for Forging Truck Equalizers [James Reilley, assignor of ½ to Bissell]	Aug. 14, 1888
389,358	Railway-Car	Sep. 11, 1888
389,359	Railway-Car [with Claes Bergman]	Sep. 11, 1888
389,408	Die for Forging Transoms for Car Trucks [James Reilley, assignor of ½ to Bissell]	Sep. 11, 1888
389,437	Railway-Car [with Claes Bergman]	Sep. 11, 1888
395,173	Die for Forging Truss Rod Anchors for Railway Cars [James Reilley, assignor of ½ to Bissell]	Dec. 25, 1888
435,676	Railway-Car	Sep. 2, 1890
449,896	Vestibule-Hood for Cars	Apr. 7, 1891
453,782	Vestibule-Hood for Cars	June 9, 1891
470,799	Railway-Car	Mar. 15, 1892
533,205	Railway-Car Platform [with Claes Bergman, assignor of ½ to Bissell]	Jan. 29, 1895

Continuing Art and Reissue Patents

CA7,834A	Improvement in car-axle boxes	Aug. 30, 1877
RE8,940	Car axle boxes; reissue [of CA7,834A?]	Oct. 21, 1879
CA28,698A	Head-rest for sleeping cars	Mar. 14, 1888
CA36,879A	Car coupler	June 23, 1891
CA38,481A	Vestibule Hood for Cars	Mar. 15, 1892
CA42,434A	Draw gear for railway cars	Mar. 28, 1893
CA43,179A	Car buffer	June 9, 1893

5.B.5 Nathan Franklin Barrett (1845–1919)

Callout: Archival holdings for Nathan F. Barrett

- **Chevy Chase Historical Society, Maryland**. A few signed (or surmised) drawings by Barrett of the town layout,[568] but no correspondence.
- *Otherwise, none located.*

A founding member of the American Society of Landscape Architects in 1899 and serving as their president in 1902–03, Barrett was one of the earliest landscape architects (or "landscape engineer," as they were sometimes styled at the time) in America. He was also one of the first proponents of geometric "formal" landscape design, though in many of his designs he inserted a sinuous 'serpentine' feature directly juxtaposed with that formal grid.[569] Just after his death, it was noted that he was more student of European landscape design then he was influenced by American styles such as that of Frederick Law Olmsted. His earlier more formal, gridded designs like Pullman gave way to more eclectic, meandering ones later in his career. Born in Staten Island, Barrett served in the Civil War (under Maj. Gen. Philip Sheridan and was wounded in Virginia at the Battle of Cedar Creek, October 19, 1864) and after the war was one of the very first American landscape designers. Running a nursery with his brother on Staten Island (a similar trajectory as the earlier Alexander Jackson Downing and his brother in Newburgh, NY), Barrett devoted himself to studying landscape design on his own. At the time, there was no formal school for the subject in America, so Barrett learned by observing—but diverging from—the works of Downing, Donald G. Mitchell, and Frederick Law Olmstead and Downing Vaux (Central Park was just beginning to be laid out at this time).[570] His first commission was in 1869 for the Central Railroad of New Jersey, landscaping around a number of their railway stations, which then led to his work on parks in general and town planning.[571]

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[568] Roderick S. French, "Chevy Chase Village in the Context of the National Suburban Movement, 1870-1900," *Records of the Columbia Historical Society, Washington, D.C.* 49 (1973): 324.

[569] Nathan F. Barrett, "Fifty Years of Landscape Modeling," *The Art World* 1, no. 3 (1916); Judith Helm Robinson and Stephanie S. Foell, "Barrett, Nathan Franklin (1845–1919)," in *Pioneers of American Landscape Design*, ed. Charles A. Birnbaum and Robin S. Karson (New York: McGraw-Hill, 2000); Bremer W. Pond, "Fifty Years in Retrospect: Brief Account of the Origin and Development of the Asla," *Landscape Architecture* 40, no. 2 (1950). The best modern summary of his life and work is Arthur Melville Pearson, "Historic Pullman's *Other* Architect: Nathan Franklin Barrett," *Illinois Heritage* 8, no. 3 (2005).

[570] For the broader story, see Robinson and Foell, "Barrett, Nathan Franklin (1845–1919)." (Barrett has an entry on 13-14), Elizabeth Barlow Rogers, *Landscape Design: A Cultural and Architectural History* (New York: Abrams, 2001); Robert M. Toole, *Landscape Gardens on the Hudson, a History: The Romantic Age, the Great Estates, & the Birth of American Landscape Architecture* (Hensonville, NY: Black Dome, 2010); George B. Tobey, *A History of Landscape Architecture: The Relationship of People to Environment* (New York: American Elsevier Pub., 1990).

[571] "Nathan F. Barrett Dead," *The New York Times*, Oct. 18 1919; "Nathan Franklin Barrett: A Minute on His Life and Service," in *Transactions of the American Society of Landscape Architects 1909–1921*, ed.

Barrett had previous experience in industrial town landscape design, such as it then existed, in that his uncle Col. Nathan Barrett, owner of the dyeing and printing company, had built one of the earliest industrial parks in the country at Factoryville, now part of West Brighton, Staten Island, NY. Nathan's father was also the founder of Barrett Nephews dye-works on the island as well. Arriving on the island from New England in 1819, Col. Barrett opened a textile dyeing and printing works with a fabric refinishing branch, as Barrett, Tileston & Co., reincorporated as the New-York Dyeing and Printing Establishment five years later. In an area first developed in the 1830s by textile manufacturers, wallpaper printers, and dyeing and textile printing factories, Col. Barrett bought a section of land in 1836, platted out with small lots and houses for the workers, and christened it Factoryville.[572] Although Col. Barrett does not seem to have engaged in any formal landscape design (though he did win a prize for "best and largest squash" at the 1851 Cattle Show of the American Institute of the City of New York), his nephew grew up on Staten Island and would have understood the context of a company town.

Barrett was hired in October 1879 by George M. Pullman to do a study of his oceanfront estate, Fairlawn (built 1873), in Elberon (Long Branch), NJ. Their connection may have come through Barrett's work for the New Jersey Central Railroad landscaping stations on the line which ran to Long Branch from 1871–76. When Pullman decided to build his eponymous town, he also called on Barrett, who was put in charge of the overall town layout, as well as the layout of the parks, including the front of the administration building and the extensive recreation areas to the east of town along Lake Calumet.[573] His and S.S. Beman's somewhat idealized plan printed in Harpers in 1885 (Figure 5.5) show only the southern half of the town, built on a regular grid system.[574] The only creativity Barrett seems to have engaged in was the lawn in front of the main office building and the small parks by the Hotel Florence and Arcade Building. Even the "play ground" and athletic course on an artificial island at the Lakeside

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Carl Rust Parker, Bremer W. Pond, and Theodora Kimball (Amsterdam, NY: The Recorder Press, 1922); Richard Schermerhorn, Jr., "Early American Landscape Architecture," *The Architectural Review* 12, no. 4 (1921). Norman T. Newton, *Design on the Land; the Development of Landscape Architecture* (Cambridge, MA: Belknap Press of Harvard University Press, 1971), 387. mistakenly has him laying out the grounds of Pullman in 1872. Barrett would later have a hand in developing Fort Worth, TX, Birmingham, AL, and Chevy Chase, MD (on the last, see French, "Chevy Chase Village in the Context of the National Suburban Movement, 1870-1900.").

[572] Ira K. Morris, *Morris's Memorial History of Staten Island, New York* (New York: Memorial Pub. Co., 1898), 1: 411 and 2: 68-69; Gale Harris, "John De Groot House, 1674 Richmond Terrace, Staten Island," (Staten Island, NY: Landmarks Preservation Commission, 2005); Sergey Kadinsky to Hidden Waters Blog, Apr. 21, 2017, https://hiddenwatersblog.wordpress.com/2017/04/21/factorypond1/.

[573] Curiously, a retrospective of his career written shortly after his death states that Barrett designed Pullman in 1872, which presumably means that he first was hired by George Pullman then, the same year Pullman commissioned Henry S. Jaffray, his architect for his Chicago Prairie Ave. home, to design Fairlawn. Barrett later got the commission to lay out the town of Elberon, NJ itself.

[574] It is also interesting to note that this "original plan" was more tied to boat slips on Lake Calumet connecting to the "Pullman main track line around the east and south of the town. As built, the town had relatively less connection to the lake than this.

still seem to be jammed into one cell of the regular grid. Somewhat amusingly, most of the sinuousness of the entire town was created by the railroad track curves that show a regular minimum radius necessitated by the rail cars.

Although the 1921 retrospective of Barrett's career stated that his work "was always of striking originality and his imaginative powers were without bounds" and said that Barrett "despised the conventional and was never content to be bound by precedent," it has to be said that the design of Pullman was not that adventurous. Only the offset market square disturbs the regular grid, and all the park areas are confined to the periphery. We do not know what he did with color and texture of the plantings or what types of nurseries were even available to him, nor is it evident what input George Pullman or S.S. Beman may have had on the landscaping, but Barrett was young and presumably found his own design voice after attaining fame with Pullman. He would later tend toward the "Reptonian" style of informal planting groups and "delightful" surprising vistas as one moved through a garden.[575]

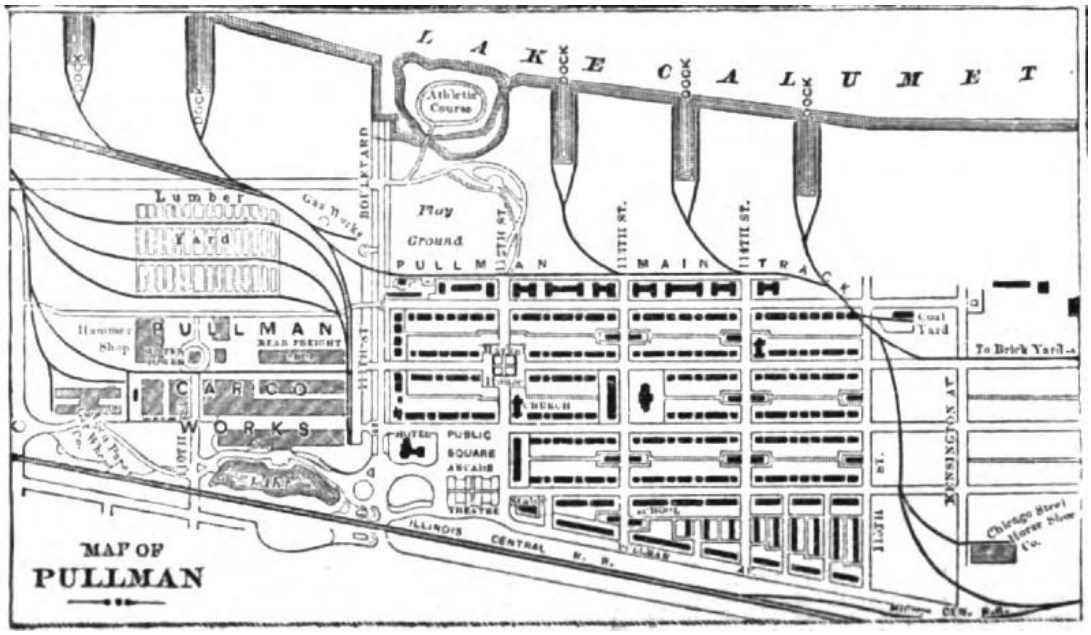

Figure 5.5. Idealized Map of Pullman. Source: Harper's Monthly 70 (1885): 454.

Later in his career, and buoyed by his fame having laid out Pullman, Barrett was one of the members of the landscape committee laying out the World's Columbian Exposition in 1892–93. In addition, he is noted for his work for Henry M. Flagler (co-founder of Standard Oil) at the Hotel Ponce de Leon in St. Augustine, Florida. The hotel was itself the product of the Pullman phenomenon, as it was built in conjunction with the development of the Jersey City to St. Augustine (the "American Riviera" or "Newport [Rhode Island] of the South") Pullman service for the Florida East Coast Railroad's *The Florida Special*, which made its inaugural run in 1887 with Pullman himself on board. Flagler had in fact

[575] On the work of Humphrey Repton (1752-1818), see John Dixon Hunt, "Humphry Repton and Garden History," *Journal of Garden History* 16, no. 3 (1996); Stephen Daniels, *Humphry Repton: Landscape Gardening and the Geography of Georgian England* (New Haven: Published for the Paul Mellon Centre for Studies in the British Art [by] Yale University Press, 1999).

developed a string of resort hotels along Florida's east coast from St. Augustine to, by 1912, Key West, and eventually, with a steamship connector, to Cuba, all in conjunction with Pullman service to get his well-heeled tourists there.[576]

Barrett created master plans for cities as far flung as Fort Worth, Texas, Birmingham, Alabama, New Decatur (later Albany and now just Decatur), Alabama, and Chevy Chase, Maryland, though only the latter seems to have been put into partial execution. In the 1890s he did a number of private house landscapes in towns like Newport, Rhode Island, Scarborough, New York, and Tuxedo [Park], New York. Those for R.G. Dunn at Narragansett Pier and for New York City lawyer Joseph Hodges Choate and his wife, Mabel, at his summer estate, "Naumkeag," in Stockbridge, Massachusetts are still highlighted in modern design studies and the last is open to the public.

In 1895 Barrett was appointed landscape architect of the Essex County Park Commission in New Jersey. There, with John Bogart, he was responsible for a great number of public parks around Newark and the Oranges. He was later an important member (1900-1915) of the Palisades Interstate Park Commission along the Hudson River. By 1888, he had moved to Rochelle Park (a "resident park", or garden suburb, which he had laid out in 1885) in New Rochelle, New York, where he taught landscape architecture seminars out of his house.[577]

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[576] Beebe and Clegg, *The Trains We Rode*, 186. David C. Lester, "Flagler, Henry M. (1830-1913)," in *Encyclopedia of North American Railroads*, ed. William D. Middleton, George M. Smerk, and Roberta L. Diehl (Bloomington, IN: Indiana University Press, 2007).

[577]. The house (with period rooms including a German peasant's kitchen, Pompeiian court, etc.) was situated on a half-acre lot and featured a diagonal "midway" (shades of the World's Columbian Exposition) that ran through the basement of the house and numerous eclectically named paths creating subdivisions of various garden types (colonial, Japanese, Moorish, etc.) See "A Half-Acre Garden," *Scientific American Building Monthly* 32, no. 3 (1901); "A Column in a Garden," *Scientific American Building Monthly* 38, no. 3 (1904); "A School of Landscape Architecture," *The Art World* 2, no. 4 (1917). and plan of his estate in Barrett, "Fifty Years of Landscape Modeling," 182.

5.B.6 Benezette Williams (1844-1914)

Callout: Archival holdings for Benezette Williams

- *None located*

Benzette Williams was a civil engineer at the forefront of the sanitary engineering movement when George Pullman employed him to design the sewer system for the new town of Pullman.[578] Williams was born in 1844 in West Liberty, Ohio and graduated from the University of Michigan in 1869 with degrees in civil and mechanical engineering. He moved to Chicago and was hired by Ellis Sylvester Chesbrough. After Chesbrough was appointed City Engineer of Chicago, he brought Williams with him as an assistant engineer from 1872 to 1878 and Williams then succeeded Chesbrough as city engineer in 1879. Williams also worked on designing a "pontoon drawbridge" to cross the Mississippi River at Prairie du Chien, Wisconsin.[579] He then became chief engineer of the "Water and Sewerage Works for Pullman" in 1880.[580]

[578] "Williams, Benezette [Obituary]," *Engineering News* 72, no. 1 (1914): 54.; *The Michigan Technic*, Issue 12 (University of Michigan Engineering Society, 1899); "Alumni Endowment Fund Members," *The Michigan Alumnus*1900, 34.;"Register of the Engineering Alumni," *The Michigan Technic* 12 (1899).; and Mary McWilliams, *Seattle Water Department History 1854–1954* (Seattle: Dogwood Press, 1955), 54-63.

[579] Benezette Williams, *Bridging Navigable Rivers: Some Self-Adjusting Pontoon Systems* (Chicago: University of Chicago Press, 1880).

[580] *The Michigan Technic*, 1899;"The Pullman Sewerage," *Scientific American: Supplement* 14, no. 350 (1882); Pearson, "Historic Pullman's *Other* Architect: Nathan Franklin Barrett," 21.

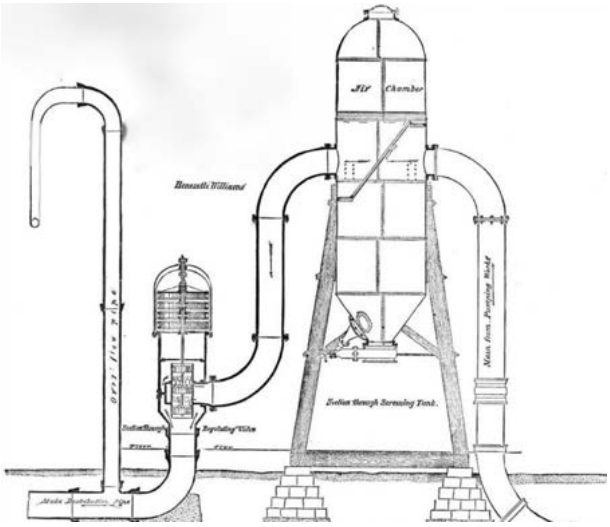

Figure 5.6. "Pullman Sewerage Screening Tank and Pressure Regulating Valve," from Benezette Williams, "The Pullman Sewerage," Scientific American *14, no. 351 (Sept. 23, 1882): 5595-5597*

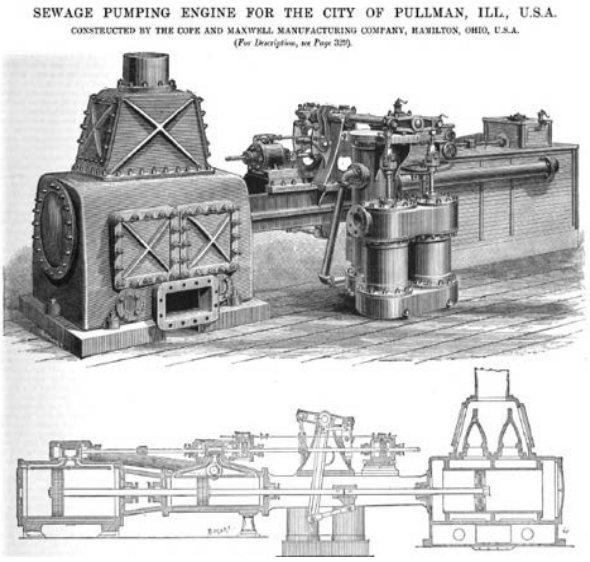

Figure 5.7. "Sewage Pumping Engine for the City of Pullman, Ill., USA," Engineering *35 (April 6, 1883): 327*

Williams cited the low elevation of the town site and the distance from Lake Michigan as his reasons for designing a separate sewage system of "town sewering" (Figure 5.6–5.8) that emptied into a sewage farm on a site three miles from Pullman.[581] Storm-water drainage from the area was directed to Lake Calumet.[582] Although sewage farms had been used previously throughout Europe, Pullman was the first municipality to use this sewage method in the United States.[583] After construction of Pullman was completed, the city was extolled as having been "built scientifically in every part, and its exceptional in respect to drainage and sewerage."[584] George Pullman himself noted "every care was taken in making perfect sanitary conditions by a water supply and an extensive and scientific system of sewerage."[585]

Williams was named Chief Engineer of the Sanitary District of Chicago in 1892.[586] He served as chairman of the board of managers of the Association of Engineering Societies and the chairman of the Western

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[581] Williams, "The Pullman Sewerage."

[582] "The Separate Versus the Combined System of Sewerage," *Journal of the Association of Engineering Societies* 4, no. 5 (1885).

[583] Martin V. Melosi, *The Sanitary City: Environmental Services in Urban America from Colonial Times to the Present* (Pittsburgh: University of Pittsburgh Press, 2008), 108.

[584] Wright, "The City of Pullman, Illinois," 107.

[585] Wickes, "The Strike at Pullman: Statements of President Geo. M. Pullman before the U.S. Strike Commission," 3.

[586] *The Michigan Technic*, 1899.

Society of Engineers in 1885 and went on to design Seattle's sewer system in 1891.[587] In 1897, he designed a portion of the Chicago Drainage Canal.[588] In 1900, the State of Missouri sued the State of Illinois and the Sanitary District of Chicago for pollution of the Illinois and Mississippi Rivers, and Williams testified on the matter.[589]

Fig. 56. Sewage and Water Pumping Station and Water Tower; Pullman, Ill.

Figure 5.8. "Sewage and Water Pumping Station and Water Tower; Pullman, Ill." From Moses Nelson Baker, Sewage Purification in America *(New York: Engineering News Publishing Co. 1893), 76*

[587] Benezette Williams, "Annual Report of the Chairman of the Board of Managers.," (Chicago1885), 121-30; Kit Oldham, "Seattle Ordinance Requiring Residences to Connect to Sewer Lines Is Adopted on December 4, 1885," *HistoryLink.org* (2015).

[588] "Methods of Work and Special Plant on the Chicago Drainage Canal," *The Engineering Record* 35, no. 11 (1897).

[589] Testimony of Benezette Williams, consulting engineer of Chicago, *Pollution of Illinois and Mississippi Rivers by Chicago Sewerage in The State Missouri v. The State of Illinois and the Sanitary District of Chicago,* 59th Cong. (1900), 11-16.

5.B.7 Duane Doty (1834/35–1902)

Duane Doty was the city manager for the Town of Pullman and with his wife (she probably wrote most of it) author of the most detailed, if biased, contemporary description of the town.[590] Born in Ohio and a graduate of the "Academy and University" in Ann Arbor, he became a teacher and eventually principal of Dexter high school (1857–60) there. He spent a year editing the *Michigan Journal of Education* before entering the Army during the Civil War. There he was an adjutant of the 7th Michigan Cavalry. Leaving the military by 1863, he was a political editor for the *Detroit Free Press* and then in 1865–75 the superintendent of the Detroit school system.[591] He was hired by the city of Chicago to become Superintendent of Public Schools in 1875[592] and then was lured away by George Pullman to run his eponymous town from its inception in late 1880.

We do know why he left a career as a public school administrator, though why he would then be tapped to run the town of Pullman is not at this time known. He served for five years as Chicago superintendent and then was voted out in June 1880 for his "corrupting" policies (though it was noted he was merely a tool of the real "corruptionists"). Doty had been accused of 'mutilating' the curriculum when he took control in 1875 and "his ring" thus "enslaving and disenthrallment [*sic*]" of the school system. The insurrection had actually begun in the municipal election of 1873, when a number of Chicago politicians sought to oust the old superintendent, and when they finally succeeded, they brought in Doty in 1875 as a reformer (or patsy, depending on one's viewpoint). The local papers abetted this shift and when Doty arrived, he was "always an indigestible morsel in the educational system of Chicago, and after hiccoughing for five years, that system … at last cast him forth." Clear sticking points included Doty's removing the Bible from the school curriculum (and possibly physically from school libraries entirely) as well as instituting an (over)ambitious new curriculum that upset many teachers. He also made an ambitious appeal in the spring of 1880 for $1 million in new funding to build more schools.[593]

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[590] Duane Doty, "On Pullman, Illinois," *Public Health Papers and Reports* 14 (1888); Doty, *The Town of Pullman: Its Growth with Brief Accounts of Its Industries [1893]*.

[591] There he published Duane Doty, *A General Classification of the Science of Geography* (Detroit, MI1871); Duane Doty and William Torrey Harris, "A Statement of the Theory of Education in the United States as Approved by Many Leading Educators," (1874).

[592] Duane Doty, *A Manual for the Use of Teachers in the Public Schools of the City of Chicago an Outline of the Course of Study; and a Manual of Methods of Instruction in Arithmetic* (Chicago: Chicago Board of Education, 1878); *Rules and Hints on the Theory and Practice of Teaching, Prepared for the Teachers of Public Schools* (New York: E. Steiger, 1879). The education dept. under Doty won a silver medal at the Paris Exposition in 1879, and Doty used his and Harris' 1874 tract as the U.S. delegation's general statement on American schooling (*New England Journal of Education* 9, no. 6 [Feb. 6, 1879], 89; *National Journal of Education* 8, no. 15 [Oct. 17, 1878], 244).

[593] "The School Appropriations," *Chicago Tribune*, Mar. 12 1880; "Board of Education," *Chicago Tribune*, June 26 1880; "Superintendent Doty's Retirement," *The Inter Ocean*, July 2 1880; "Northwestern Notes: Chicago Redeemed?," *National Journal of Education* 12, no. 4 (1880). There is even mention of the former assistant superintendent, Francis Hanford, being shot after sending an anonymous letter

There is a great deal of sympathy, however, between the rules ("duties") he proscribed for teachers and students and the sort of mutual-obligation social compact that Pullman workers and residents were supposed to develop. As one article put it after his ouster, "although Mr. Doty was an excellent business man, he emphasized and multiplied mere details so much as to burden and alienate the teachers, at the expense of the usefulness of the schools."[594]

Doty was also known as quite an impressive extemporaneous speaker and a family genealogy notes that both he and his wife, Margarita Jane (*née* Richards), were "writers for the higher class of magazines and newspapers and have contributed many of articles of note to them on literary and philosophical subjects." If so, they must have written them without bylines as they are not apparent in modern indexes.[595] When he was ousted from the public schools, he donated his collection of 1,350 volumes of works on education to the Chicago Public Library, the largest donation given to the library since the Great Fire.[596] His alumni obituary also claims he was a "civil engineer" for Pullman from 1883 onwards, a term used when he reported nativity statistics for the town in 1898 and 1899,[597] though probably not in the formal, degreed sense. Rather it reflected the rise of the "city engineer" who oversaw the planning and maintenance of the urban infrastructure, though most of those men would have increasingly had degrees in civil or mechanical engineering.

Doty died in Pullman in 1902 at the age of 68.

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to the Common Council. Whether or not it was entirely true, the quite partisan *NJE* editorial ended saying, "No more intrigue; no more petty chicanery, puerile or monkeyish mischief in the administration of school in Chicago! No more intimidation, espionage, terrorism, or plotting, to mystify a corps of schoolma'ams and schoolmasters! No more pothouse politicians to set traps for hard-working pedagogues, to excite their fears of decapitation by ludicrous mystery and slanderous innuendo, or hound them to despair by 'putting up jobs'! No more dismissals from motives of personal pique and petty, puerile spleen! No more gratuitous publication of the names of 'dropped' teachers, under this cowards' plea that 'discipline must be preserved'! No more political or religious tests in the employment of teachers!"

[594] *Detroit Free Press*, June 27, 1880, p. 4.

[595] Ethan Allen Doty, *Doty-Doten Family in America: Descendants of Edward Doty, an Emigrant by the Mayflower, 1620* (Brooklyn, NY: [E.A. Doty], 1897), no. 665; "Duane Doty [Obituary]," *Michigan Alumnus* 9 (1903); "Western Educational Meetings–Illinois," *National Journal of Education* 11, no. 4 (1880): 60. He was also a good PR man for Pullman in general: *e.g.*, Duane Doty, "Art in Car Building," *Railroad Car Journal* 6, no. 6 (1896); "President Diaz's Private Cars," *Railroad Car Journal* (1897); "The Pullman Exhibit at the Omaha Exposition," *Railroad Car Journal* (1898).

[596] "Public Library," *Chicago Tribune*, Sept. 30 1880.

[597] "Nativity of Pullman Wage Earners," *Scientific American* 78, no. 6 (1898); Duane Doty, "Notes and Abstracts: Annual Statement Relating to the Operatives and Wage-Earners at Pullman," *American Journal of Sociology* 4, no. 4 (1899).

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5.C Sociotechnical Systems of the Pullman Experience

The Pullman Experience is obviously more than just the train cars, yet it is at its core a story of the history of a technology that changed American travel. Over the last four decades, historians of technology have reoriented how history of technology is done from great inventor stories and a focus on 'firsts'—where George Pullman would surely qualify—to a broader contextual understanding of the sociotechnical system in which a particular object or technology is embedded. In the case of Pullman, there is of course the story of the great inventor (mostly an innovator, in this case), and there are good stories to tell about George M. Pullman as the first to fully market the opulent sleeper and parlor cars. Similarly, the town of Pullman is perhaps more notable as the first unified industrial paternalism undertaking (of the welfare capital model, though as Chapter 4 shows, there were numerous antecedents). But the 'systems' approach allows a better understanding of how people, objects, and institutions (be they economic, industrial, governmental, societal, and so forth) interact and create what we simplistically refer to as technology. With the Pullman railroad system, each part of the organization can be analyzed independently—cars, manufacturing, operation, staff, the town itself, and so on—but in many ways they only fully make sense when viewed as part of the larger system that gives them form and meaning. And in particular, the coordination and management of the whole technological system is what makes it stand apart from a simple invention story.[598]

Sociotechnical elements within technological systems have a number of salient features: they are said to shape the design of the artifacts within the system (and to some extent, the users, too, are shaped by the new technologies); they gain momentum as they grow and thus exert more influence (*i.e.*, market or

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[598] The idea of technology as a system is typically tied to the work of Thomas Hughes in the 1970s, who in studying the consolidation of electrical systems of major metropolitan areas (coincidentally, strongly based on the experience of the businessman/innovator/investor Samuel Insull and his work creating the Chicago electrical system) recognized that it was not enough to talk of the generators or the light bulbs or the wires … or the investors or the consumers or the advertising. Rather, one had to recognize that all of these and more are tied up in an interdependent system for the "technology" to be successful. It is in fact the success of the *system* that leads to what we would call a successful technology. Thomas Parke Hughes, *Networks of Power: Electrification in Western Society, 1880-1930* (Baltimore: Johns Hopkins University Press, 1983); John Law, "Technological Systems," in *Science, Technology, and Society: An Encyclopedia*, ed. Sal P. Restivo (Oxford and New York: Oxford University Press, 2005); "Networks and Large-Scale Technological Systems." It is unclear to what degree Hughes was pulling from the idea of the business system in Alfred D. Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, MA: Belknap Press, 1977). The concept is examined in various ways in Wiebe E. Bijker, Thomas Parke Hughes, and Trevor Pinch, *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology*, 1st MIT Press paperback ed. (Cambridge, MA: MIT Press, 1989). There have been other theoretical frames that have been added to the history of technology repertoire, including *actor-network theory*, *sociotechnical imaginaries*, and others, but in a general way, *technological systems* remains the most widely used.

social 'force') on the other parts of the system; and they can often be perceived to be acting autonomously, as if the technology had a life of its own without the people that actually keep it running.[599] As a technological system grows and especially as it gets successfully disseminated throughout society, the system builds momentum and major changes become more and more difficult.

Railroads were some of the first of these large, systemic technologies, since it was their very network which allowed them to become economically (or, one could say, socio-culturally) successful in the nineteenth century. Studying the overall operations aspect of railroads, one modern European historian has commented that railways represented a "sense of unity and autonomy" in that "the smoothness of the trains motion coupled with the synchronization of technologies and organizational structures rendered the railway a *machine ensemble*, a coherent spatially extended techno-bureaucratic entity, rather than simply the coming together of trains and track."[600] Railways also benefited from increased urbanization and industrialization across the country, both of which affected supplies and suppliers, consumables and consumers.

Technological systems like Pullman by their nature also require a type of organization and control in order for them to function smoothly and to thrive in a competitive economic sphere. While that control can be relatively decentralized, in the case of Pullman and most large-scale technological systems developed in the later nineteenth-century, the control tends towards high centralization. Pullman was very effective in developing that centralized control, and did so by creating an interesting hybrid of individual customization of the cars for each order while at the same time providing a uniform rail experience for passengers both materially and managerially.

A word of caution should be added when thinking of Pullman as a technological system. The usual formulation assumes that all parts of the system are connected in a mutually influential, if not perfectly symmetrical relationship. That is, each element affects the others in the system in some way. Further, it is assumed that the elements are all symbiotic and in fact can produce emergent properties through their interaction. Although a perfect symmetry never exists, in the case of Pullman we have three quite distinct elements: the manufacturing business, the operational business, and the town itself. While these are obviously connected they were also considerably independent of one another and abstractly have no necessary connection to one another.[601] These divisions were punctuated over time: with the forced separation of the city from the company after 1894, with the federally mandated divestment by

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[599] Langdon Winner, *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought* (Cambridge, MA: MIT Press, 1977).

[600] Wolfgang Schivelbusch, quoted in George Revill, *Railway* (London: Reaktion Books, 2012), 71-72.

[601] That is, a model town on the lines of Pullman, IL could have been drawn up for any industry, not just railway car manufacturing, or even independent of any industry (modern corporatized gated communities are an example); car manufacturing and operation need not at all be interconnected as the case of other major car manufacturers like Budd or ACF demonstrate; and the fact that the operations of the Pullman system were run from downtown Chicago and not the town and then distributed in depots all across the country reminds us that operations and the town were in fact quite disconnected.

Pullman of its operational arm in 1947, or even the company's choice to get into, and then get out of, all-metal automobile body manufacture in the 1930s. Add to this the mandate for Pullman National Monument to tell the story of the Pullman Porters, who were strictly part of the operational arm only, entirely disconnected from the town and factory of Pullman, and one finds that the unifying concept of a technological system is not as unifying in this case as in some others. That said, Pullman certainly did succeed by the careful orchestration of all its elements in order to achieve the success it did. We might therefore think of this as a larger system comprised of three smaller subsystems which had to hand off to one another at various points. In doing interpretive history of technologies, then, it is always valuable to think in terms of the system, and one of the challenges for Pullman National Monument will be how to tell the stories—each quite straightforward, when separated—in an integrated fashion.

Pullman, then, was made up of a combination of engineering, social, and human components, each of which contributed to the success of the system, and any of which could contribute to its failure. And we should remember that distinguishing the technical from the social is an artificial distinction in most cases. Technologies do not act without people, and people often only act through technologies. As systems go, Pullman was very much an example of a strongly centralized one, and, in the formulation of Louis Mumford, much more *authoritarian* than *democratic* in its autocratic organization of factory, town, and rail service.[602] Even though the network spanned the continent, manufacturing, operations, and the porters were strongly and centrally controlled from Michigan Avenue with regulations, standards, and edicts. It also appears that all car manufacturing and repair across the country was mostly planned at the Pullman headquarters. Similarly, although again independently, the town was strongly and centrally controlled from the town offices in Pullman. To what extent Duane Doty might have been something of a feudal lord would be an interesting investigation; initial impressions though suggest he was more of an early bureaucratic city manager.[603]

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[602] Lewis Mumford, "Authoritarian and Democratic Technics," *Technology and Culture* 5, no. 1 (1964).

[603] One interesting avenue of investigation might be to connect the initial philosophy of Pullman town and then its operations of after 1897 (*i.e.*, post-divestment) in terms of the quasi-industrial-turned-civic paternalism that came to be known in early twentieth-century Progressivism as "technocracy" (as well as "sewer socialism"). See Guy Alchon, "Technocratic Social Science and the Rise of Managed Capitalism" (Ph.D., University of Iowa, 1985); Ariane Mary Aphrodite Liazos, "The Movement for "Good City Government": Municipal Leagues, Political Science, and the Contested Meaning of Progressive Democracy, 1880-1930" (Harvard University, 2007). On the later manifestation: Douglas E. Booth, "Municipal Socialism and City Government Reform: The Milwaukee Experience, 1910-1940," *Journal of Urban History* 12, no. 1 (1985); Neil K. Basen, "Municipal Socialism in the United States," *International Labor and Working-Class History* 11 (1977).

Table 5.1. Cost of Operation for Nine Sleeping Cars, Oct. 1885–Sept. 1886.

ITEM		COST	%
Porters		$1,783.07	15.7%
Washing		1,372.73	12.1%
Supplies		848.72	7.5%
Running	– Labor	2,638.25	23.2%
	– Materials	837.68	7.4%
Overhaul and Repair	– Labor	1,458.64	12.8%
	– Materials	2,014.67	17.7%
Oil and Waste		212.49	1.9%
Fuel		188.97	1.7%

GROSS	
Expense:	$11,355.22
Revenue:	18,326.30
Net:	6,978.01
AGGREGATE	
Labor:	$7,252.69 (63.9%)
Materials:	4,102.53 (36.1%)

Consider the following when thinking about Pullman as a system: in 1886 it cost over $1,000 to run a sleeper for the year, though on average each brought in about $2,000 in revenue. Looking at just nine cars Pullman that ran during that year, they made nearly 365,000 miles and took an army of workers to maintain (Table 5.1). Before the car made it to the road, it was ordered by a railroad or a private individual, designed by an army of draftsmen, outfitted by another army of interior decorators, built by a cast of hundreds, from lumbermen to sawyers to joiners and carvers, forge men (and later welders), joiners, cabinetmakers, plumbers, upholsterers, and painters, and then handed off to an entire service department to be outfitted with pillows, linens, signage and more. Once on the road, the car was operated by a conductor and typically eight porters per train. Those trains also required crews, dining cars and the food systems (and laundries) that replenished them at every depot, repair shops, ticketing agents, and baggage handlers. Of course, the passengers were part of the system as well. Technologically we are talking about the train and all its components, but also about the railroad, it's signaling and water towers, bridges and switching yards, and advertising and contractual arrangements with Pullman. Depending on how far you want to go into the fractal of the system, one might even consider the luggage and the briefcases of travelers—and remember the different types of travelers have different types of luggage—for they, too, needed a place to exist in the system as the train sped across the country. Their sizes and shapes formed the design of the interior spaces of the cars and the number of baggage cars on each train.

The company itself had more than recognized that they were a large system by the end of the 1920s, though it should be noted that their concept of the system is a sort of limited subset of a technological system. In 1929, James Keely, the assistant to the president of the Pullman Company, gave an address to the Chicago Association of Commerce in which he specifically described "the Pullman System" (emphasis ~~added):~~

[604] The following is from "Statement of Cost of Sleeping Cars from September 20, 1885 to September 30 1886, Newberry Library, Pullman Co. papers, 01/01/01, box 7, fol. 94: Sleeping Cars – Financial Statements, 1882-1886.

> The Pullman system is based on three fundamental proposals:
>
> 1. To provide for all the railroads passenger train *equipment* representing the last word in comfort, convenience, luxury and safety.
>
> 2. To *operate* this equipment everywhere, the same car passing without interruption over the lines of his many railroads as maybe required to complete its trip.
>
> 3. To provide for this continent-wide passenger *service and equipment pool*, so that the peaks and depressions, seasonal and regional, in travel, may all be met without maintaining in an uneconomically large number of cars. …
>
> The Pullman system, as an equipment pool, is both a vast economy and a huge national convenience. Travelers are often surprised to learn that only about 9,000 Pullman cars are required under this plan of intensive service to supply the country. Under the *centralized management*, the utmost of mileage and service is obtained from every car through the entire year. …
>
> The Pullman system is the warp and woof of unification, running throughout the whole fabric of the countries railroad establishment. It would be hard to conceive a public service so effectively preserving the benefits of unification while avoiding the evils of monopoly. The railroads are left free to compete, and most vigorously they do. The Pullman organization is indeed an effective aid to competition. For example, a railroad company wishes to put out a new and particularly de luxe train. It wants something of special character, quality and design brought into cars in service. So the Pullman company is called upon, designs and builds the cars, owns them, and manages them.[605]

What Keely leaves understated in that very last sentence is all the details that allow such a system to function. In the design-build-manage sequence, there are hundreds if not thousands of people involved, dozens and dozens of discrete entities internal to the system (as shops, departments, suppliers, and so on) as well as all the external (exogenous) factors which every decision-making person in the system is responding to, all of which shape the final product.

Future studies of Pullman might attend to the economic, tactical, and political techniques that George Pullman and the Pullman Company used in order to foster their empire. At the same time however, one should look to broader American ideas of mobility, class and status, and leisure. Although most major routes could easily sustain one or two opulent Pullman Palace trains for well-to-do clients, by the 1920s or 30s, Pullman travel had become a taken-for-granted (yet still often aspirational) middle-class feature of national life. In those interwar years and into the 1950s Pullman actively marketed to the business traveler, a separate demographic that shaped the technology in its own way. And although the broader study of rail travel is probably beyond the scope of the Pullman National Monument, some attention should be paid to how, at least before 1947, Pullman developed and maintained the quite astonishing coordination between its cars and the railroads that pulled them and the ticketing and servicing systems that sustained them.

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[605] "The Pullman System", in Robert J. Wayner, *The Pullman Scrapbook* (New York: Wayner Publications, 1971), 3-7.

Technological systems, especially large-scale ones, require a strong organizational and control system in order for them to thrive. This has long been recognized in the rise of management as a field, and within studies of the history of business (which has also become partially congruent with the history of technology when looking at late nineteenth- and twentieth-century technologies). Not nearly enough is understood about the first twenty or thirty years of Pullman's management structure. For one thing, Pullman did not take his company public and start issuing annual reports until 1875, and even for many years after that, reports were merely annual balance sheets, with no explanation of the managerial structure of the corporation. Nonetheless, like any successful business, Pullman managed to recruit or develop employees with deep and specialized expertise (whether that be on the shop floor or in the dining car) and then managed to effectively organize them into an efficient (or at least very profitable) system. We get only one remarkably complete glimpse into the managerial structure of Pullman from an article by the president of the company in 1916, extolling the integration of Taylor's scientific management with the companies "common sense management."[606]

In the early years of wooden rail car manufacturer, it seems that each independent shop (metal, wood, upholstery, paint, etc.) was relatively autonomous and although there probably was some hierarchy within each, it was relatively flat. Particularly in the finishing trades such as carving, marquetry, detail painting, and decorating, Pullman prided itself on having highly skilled craftsmen working for him. As production volumes grew, and especially with the shift to steel and then lightweight carriages—and in parallel with most other American industries of the time—workers became increasingly specialized and less highly skilled (or at least, less broadly skilled at high-skill tasks). This was both a cause and consequence of increased hierarchical managerial control.

Managerial decisions can affect all levels from production to consumption. They need to be attuned to how a car works, and how it is perceived by the traveler. Alfred Chandler realized long ago that large businesses did not succeed specifically because of internal differentiation and specialization, but rather because of what he called "successive inclusion." That is, they brought all the various steps under their control, either by doing it themselves in-house (this was the Pullman way), absorbing those steps through vertical integration (or in the Pullman case through about 1920, horizontally absorbing all the competition), or by promulgating very strict specifications for outside suppliers (the Apple Computer way today). At the same time a managerial hierarchy developed which replicated the military distinction of line and staff officers—those who are responsible for one particular skill (whether artillery or cavalry in the army, or drop-forging or marquetry in the car building shop), and those who carried out support activities for those lines, respectively.[607] This is the so-called "visible hand" of management (as compared to the "invisible hand" of economics of Adam Smith).[608]

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[606] Joseph Husband and John S. Runnells, "What a New System of Management Did for Us," *System: The Magazine of Business* 29 and 30, no. 2-6; 2 (1916); ibid.

[607] Revill, *Railway*, 73-75.

[608] Chandler, *The Visible Hand: The Managerial Revolution in American Business*. Chandler found most of the early development of this in the operations of railroads after the Civil War, though it is notable in his later work on the development of hierarchical management in the American corporation, railways

Far too little is understood about the labor history of Pullman beyond the 1894 strike (see Section 3.A.3). Even the Great Railroad Strike of 1922 is poorly understood in the Pullman context, even though one would expect that it should be, given that it was known as the "Railway Shopmen's Strike," and Pullman was at the peak of its production at that time.[609] And although there are detailed examinations of the Railway Labor Board that adjudicated the strike, such analyses do not percolate down to shed enough light on the shops themselves.[610]

Railway unions such as the American Railway Union (ARU) and union organizers have been reasonably well studied, although their fractured nature (there were over a dozen unions in the late-nineteenth and early-twentieth century) has inhibited a unified understanding of how labor movements affected a single shop. The so-called "Big Four" unions (Brotherhood of Locomotive Engineers [BLE], Order of Railway Conductors of America [ORCA], Brotherhood of Locomotive Firemen and Enginemen [B of LF&E], and then Brotherhood of Railroad Trainmen [BRT]) were not those of the shops, and most of the rest were specialized unions for the running of the railroads. The shops, then, were left to be organized under general labor unions, which tended to bypass to skilled workers that made up the bulk of Pullman's early craftsman.

Like the trades that they practiced, the organization of skilled workers in railway manufacturing shops, especially in the nineteenth-century, have also been neglected in favor of attention to their products (that is, the locomotives and rail lines). George Pullman, and Robert Todd Lincoln after him were no friends of labor and believed that a good working environment and amenities would disincline his workers from wanting or needing a union.

All this said, the labor history at Pullman construction and repair shops is a topic well worth study, but we have found it to be one that is largely still locked within the primary source archives.[611] The position of the company would be all too readily apparent in the pages of *The Pullman News*, a propagandistic

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play little role: *Strategy and Structure: Chapters in the History of the Industrial Enterprise*, Mit Press Research Monographs (Cambridge, MA: MIT Press, 1962).

[609] Davis studies the strike in general, and there is occasional mention of Pullman therein Colin J. Davis, *Power at Odds: The 1922 National Railroad Shopmen's Strike* (Urbana: Univ. of Illinois Press, 1997). A good contemporary description of the matters at issue are in Margaret Gadsby, "Strike of the Railroad Shopmen," *Monthly Labor Review* 15, no. 6 (1922). and the strike is of some importance for the Pullman Porters: Mark Noon, "'It Ain't Your Color, It's Your Scabbing': Literary Depictions of African American Strikebreakers," *African American Review* 38, no. 3 (2004). There are records about it in the Pullman Company Archive in the Newberry Library, 06/01/01, fol. 122a-j, Strike of Railroad and Pullman Employees, History and Information Files, 1922.

[610] H.D. Wolf, "Criticisms of the Railroad Labor Board and an Evaluation of Its Work," *The University Journal of Business* 5, no. 1 (1927).

[611] There are records relating to the strike, including executives correspondences that describe their use of African American workers as strike breakers, in collections of the Newberry Library, Pullman Company Archives, 01/12/03 Pullman's Palace Car Company. Secretary. Strike Scrapbooks, 1894-1897.

company publication published from 1922 to 1958 (it is perhaps coincidental that the newspaper began just at the time of the Railway Shopmen's Strike). It is unclear where the voices of the workers within the shops may lie. The voices of the townspeople were quite loud in 1894, but are difficult to recover for the period before or after that. The voices of the conductors and porters are increasingly being recovered. The voices of the railroad consumer—the traveler—may be found in the interplay between reminiscence and the advertising about the travels.

PULLMAN NATIONAL MONUMENT

Figure 6.1. Map of Pullman National Monument showing the phases of town construction

Legend

- After 1959
- 1938-1959
- 1892-1938
- 1880-1892
- Missing Footprint from 1892
- Pullman Boundary

Street Map Source: Esri 2019

Map by Kyle Parker-McGlynn