



Battling Corporate Fiefdoms:

How can learnings from the evaluation of company town developments in the nineteenth and twentieth centuries be applied to modern corporate-dominated settlements?

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i. Abstract

Are corporations more powerful than nation-states? Are corporations capable of supporting their employees through regulations set upon them by the state, or by proactively creating social support networks in legal jurisdictions where the state fails to do so? A spatially manifested example of corporate sovereignty emerges in company towns, where a significant number of town residents are employees of a single company. Four company towns, identified through four factors (*Modern-historical* and *tabula rasa-takeover* dichotomies) were analysed from an intersectional economic, historical and urban planning perspective. Thanks to the Laidlaw Foundation, in-person documentation of two American towns, Pullman in Chicago, and San Bernardino in California, was made possible. Based on the study's findings that companies tend to establish more beneficial spatial infrastructure based on their employees' perceived corporate value, as well as revealing an encroachment on employees' work-life balance, the study concluded with several recommendations on how to dismantle Amazon's current labour monopsony within San Bernardino.

Keywords: Company towns, architecture, urban planning, physical infrastructure, spatial analysis, Pullman, San Bernardino, Google, BASF Ludwigshafen, Amazon, corporate sovereignty, corporatism, neoliberal economics

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1. Introduction

International economies have undergone massive changes since the 1970s thanks to the neoliberal economic revolution. In the realisation that governments are unable to fully provide for economic growth or social welfare as an inefficient form of market distribution, neoliberalism encouraged policies based on individualism, and private opportunism.¹ For instance, government intervention in markets, widely accepted in the 20th century, especially during the Great Depression, were shunned in favour of the theory that totally free markets are more efficient at distributing market goods. Instead of intervention, governments should allow private companies or individuals to adopt an entrepreneurial model. For instance, this manifests in the privatisation of state companies; or in general, the privatisation of entire sectors previously moderated by state administrations.²

On one hand, states may benefit from privatising certain industries. SpaceX's presence in spaceflight—a traditionally state-dominated industry—democratising spaceflight by lowering cost and technological barriers. On the other hand, neoliberal policies have been criticised by scholars such as Professor Johanna

¹ Johanna Bockman, "Neoliberalism," *Contexts* 12, no. 3 (2013): pp. 14-15.

² Bockman, "Neoliberalism," pp. 14-15.

Bockman, who object to its degradation of social protections, such as stagnant wages, the transformation of state penitentiaries into abusive private penitentiary practices, etc. More commonly discussed is the failure of healthcare in the US, which spends far more per capita than any other country in the world, but fails to provide adequate healthcare coverage to citizens due to the dominance of insurance companies in the sector that ironically create market inefficiencies through deductibles and unequal coverage.³

In the 1980s and 1990s, speculative science fiction emerged based on the observations of the consequences and behaviour of the neoliberal economic revolution. Canadian author William Gibson was one of the first to explore this premise. His *Sprawl* novel trilogy introduced a high-tech post-nuclear dystopia that singlehanded pioneered the genre known as *cyberpunk*.

While Gibson mainly explored the possibilities of artificial intelligences imbued with personal agencies in *Neuromancer* (1984), his vision takes place under the shadow of massive corporate entities in an age of diminished state powers: *Hosaka* and *Maas Biolabs* wage corporate warfare through hard power, using private militaries to poach rival corporate talents and secrets in *Count Zero* (1986).⁴ Corporate dominance extends beyond R&D and market dominance. *Mona Lisa Overdrive* (1988) briefly describes demonstrations of corporate fealty, imported from traditional Japanese displays of loyalty such as *bushido*.⁵

In an age of neoliberal economics, corporations possess enough power to circumvent state power, and on occasion demonstrate it through their will. Today, transnational corporations generate annual revenues that exceed national GDPs. In 2016, Amazon produced a revenue of over USD \$117 billion, comparable to Kuwait's 2016 GDP of USD \$110 billion.⁶ In 2016, following a 2015 terrorist attack in San Bernardino,

³ Clement, Marilyn. "Healthcare Mobilisation: Privatisation vs Quality Healthcare For All." *World Affairs: The Journal of International Issues* 11, no. 2 (2007): 146–53.

⁴ William Gibson, *Count Zero* (New York, NYC: Ace Publishing, 2006).

⁵ William Gibson, "Toys," chapter, in *Mona Lisa Overdrive* (London, UK: Orion Publishing Co, 2017), 112.

⁶ Fernando Belinchón and Qayyah Moynihan, "25 Giant Companies That Are Bigger than Entire Countries," *Business Insider* (Business Insider, July 25, 2018),

California, the FBI requested Apple Inc. to unlock an iPhone involved in the attack as part of the investigation.⁷ Apple refused, insisting the creation of a software backdoor compromised Apple's guarantee of user privacy and a massive vulnerability to all Apple products.⁸ While the case did not set a legal precedent, the debate between corporate and federal rights remains an open controversy and illuminates the extent to which corporations may circumvent judicial powers.

Corporations have rivalled entire nation-states before — not only through judicial and financial domain, but also through hard power. At the height of its power in 1803, the British East India Company was able to overthrow and occupy the Mughal Empire, backed by a private army over a quarter of a million troops strong.⁹ In the 19th century, American and British companies were responsible for creating company towns - communities that are dependent on a corporate firm for most to all of functional town life, showing that overdependence on corporations is not new.¹⁰ In a neoliberal economic revival, are corporations still capable of dominating non-economic spheres of life?

When corporate organisations have as considerable power as significant nation-states, questions regarding employee welfare emerge. As corporate subjects, are employees entitled to the same protections a traditional state is obliged to provide? Do corporations provide employee welfare, such as through job healthcare benefits, out of an altruistic nature, or through necessities forced upon the company?

<https://www.businessinsider.com/25-giant-companies-that-earn-more-than-entire-countries-2018-7#apples-revenues-in-2017-were-higher-than-portugals-gdp-23>.

⁷ In the Matter of the Search of an Apple iPhone Seized During the Execution of a Search Warrant on a Black Lexus IS300, California License Plate 35KGD203 (United States District Court for the Central District of California March 21, 2016).

⁸ Sam Thielman, "Apple V the FBI: What's the Beef, How Did We Get Here and What's at Stake?," The Guardian, February 20, 2016,

<https://www.theguardian.com/technology/2016/feb/20/apple-fbi-iphone-explainer-san-bernardino>.

⁹ William Dalrymple, "The East India Company: The Original Corporate Raiders | William Dalrymple," The Guardian, March 4, 2015,

<https://www.theguardian.com/world/2015/mar/04/east-india-company-original-corporate-raiders>.

¹⁰ "Company Town Definition & Meaning," Merriam-Webster (Merriam-Webster), accessed January 13, 2023, <https://www.merriam-webster.com/dictionary/company%20town>.

Corporate domination is more than a social phenomenon. It also manifests architecturally, through the infrastructure it occupies, including but not limited to warehouses, distribution centres and corporate offices. In recent years, Amazon has built factory towns across America. As the largest employer in the Inland Empire, California, whole families are employed by Amazon, making them dependent on the corporation for livelihood.¹¹

Physically, corporate domination is acutely aggravated. Amazon's logistics facilities have rapidly expanded across the United States, most notably in Inland Southern California, where it has become the region's largest employer. Its status in the region has been described as a 'linchpin' complicit in sustaining regional spatial injustice.¹² Ergo, Amazon has created company towns in the Inland Empire. By pursuing this research question, I also hope to determine whether corporations can only behave in an exploitative manner, or are capable of acting in its employees' interests.

With this stated, one may posit that company towns are making a comeback across the United States in the neoliberal age, and with it, the same patterns of corporate domination. Therefore, this investigation embarks upon the following research question:

How can learnings from the evaluation of company town developments in the nineteenth and twentieth centuries be applied to modern corporate-dominated settlements?

¹¹ Maanvi Singh, "Pollution Everywhere': How One-Click Shopping Is Creating Amazon Warehouse Towns," *The Guardian* (Guardian News and Media, December 11, 2021), <https://www.theguardian.com/us-news/2021/dec/11/how-one-click-shopping-is-creating-amazon-warehouse-towns-were-disposable-humans>; Alex N. Press, "Amazon Is Creating Company Towns across the United States," *Jacobin*, July 24, 2021, <https://jacobin.com/2021/07/amazon-warehouse-communities-towns-geography-warehouse-fulfillment-jfk8-caj-on-inland-empire>.

¹² Jake Alimahomed-Wilson, Ellen Reese, and Juliann Emmons Allison, "11: What Happens When Amazon Comes to Town?: Environmental Impacts, Local Economies and Resistance in Inland Southern California," in *The Cost of Free Shipping: Amazon in the Global Economy* (London: Pluto Press, 2020), pp. 176-193.

To fully explore this question, there are three main objectives involved in this investigation. The first involves a definition and classification of historic and contemporary company towns. Next, significant company towns will be identified for analysis of the matter, comparing and contrasting the qualities and structures of company towns at different points in time. Based on these findings, a proposal to balance relationships between corporate establishments and local communities will be posited as part of a spatial intervention.

While these objectives are vague, this research topic is worthy of attention because of dangerously low labour standards modern companies can set in a neoliberal era. For example, Amazon's success is built upon mistreated distribution centre workers, who work under increasingly demanding production quotas and are actively discouraged from forming labour unions through worker intimidation.¹³

Federal efforts made to rein in such corporate dominance have been unsuccessful so far.¹⁴ If left unchecked, governments may choose to conform to the needs of corporations over public interests, which is already occurring at multiple levels of state. This research attempts to offer urban planning solutions that attempt to subtly counteract the deficiencies created by monocorporate areas, rather than recommending federal political solutions in the hopes of avoiding a preexistent impasse. If successful, recommendations will ensure higher economic and social diversity in corporate neighbourhoods, reducing corporate dependency.

¹³ Michael Sainato, "I'm Not a Robot': Amazon Workers Condemn Unsafe, Grueling Conditions at Warehouse," *The Guardian* (Guardian News and Media, February 5, 2020), <https://www.theguardian.com/technology/2020/feb/05/amazon-workers-protest-unsafe-grueling-conditions-warehouse>;

David Streitfeld, "How Amazon Crushes Unions," *The New York Times* (The New York Times, March 16, 2021), <https://www.nytimes.com/2021/03/16/technology/amazon-unions-virginia.html>.

¹⁴ Annie Palmer, "Amazon Referred to DOJ for Potential Criminal Obstruction of Congress," *CNBC* (CNBC, March 10, 2022), <https://www.cnbc.com/2022/03/09/amazon-referred-to-doj-for-potential-criminal-obstruction-of-congress.html>.

2. Methodology

2.1 Introducing the Company Town

Company towns are perceived to be a thing of the past - mostly because the traditional definition of a company town barely applies to settlements applied across Europe and North America today. Traditionally, company towns were usually created out of employer necessity in industries where work was remotely located. Mining companies might establish operations in remote locations, such as the Cerro Gordo Mines, near Death Valley National Park, California. With a single road running through the Cerro Gordo mountain range, areas often had little to no basic infrastructure to support company operations. Thus, companies were obliged to provide services to support its employees, from housing, to stores, on top of company equipment.¹⁵ This was particularly relevant in North America, where the western frontier was only ‘closed’ by 1890, indicating a lack of unsettled land tracts within the United States; and implying a severe lack of basic infrastructure across the Americas. Admittedly, company towns still exist today. The town Empire, featured in the film *Nomadland* (2020), is a modern company town focused on gypsum mining in remote Nevada, formed under the same conditions as Cerro Gordo. Thus, Horace Davis defined it as a town ‘inhabited solely or chiefly by the employees of a single company or group of companies which also owns a substantial part of the real estate and homes’ in the 1930s.¹⁶ However, the definition of a company town has evolved, as the argument for remote company towns falls out of favour in modern times. Hence, the nonpartisan policy development organisation, Centre for American Progress suggests that modern company towns today are characterised by ‘a dominant employer that employs a large portion of the total local labour force.’¹⁷ Since both historical and modern company towns can be applied using this framework, the CAP’s definition will be adopted to apply for this report.

¹⁵ J. D. Porteous, “The Nature of the Company Town,” *Transactions of the Institute of British Geographers*, no. 51 (November 1970): 127–42, <https://doi.org/10.2307/621766>.

¹⁶ Marcelo J. Borges and Susana B. Torres, “Company Towns: Concepts, Historiography and Approaches,” essay, in *Company Towns: Labour, Space and Power Relations across Time and Continents* (New York, NY: Palgrave Macmillan, 2012), p. 4-5.

¹⁷ Caius Z. Willingham and Olugbenga Ajilore, “The Modern Company Town,” Center for American Progress, November 1, 2022, <https://www.americanprogress.org/article/modern-company-town/>.

If infrastructure is necessary for employers to support their workforce, a lack of need to build original infrastructure denotes the presence of pre-existing infrastructure corporations are free to take advantage of, as Leanna Garfield noted while writing for Business Insider.¹⁸ This implies a set of various criteria that company towns can be classified as. Four different archetypes, and four towns, have been correspondingly identified for analysis in Table 1 with regards to significant defining criteria.

2.2 Defining Factors

Establishing company towns as physical phenomena occurring in the present and past with two types of spatial domination gives us the following classifiers for company towns: *Modern*, *historical*, *tabula rasa*, and *takeover* towns.

Modern refers to towns created during or after the 20th century, a time period following the peak of 19th century company towns.

Historical refers to company towns created before the 20th century, spanning a broader time period roughly from the Industrial Revolution to the decline of company towns in the late 19th century.

Tabula rasa refers to towns created through corporations, which are responsible for creating proprietary infrastructure to support their operations independently. Tabula rasa company towns are often built around immobile primary industrial operations such as mining in remote conditions.

Takeover refers to towns overtaken by corporate power, which comes to dominate a specific town.

Companies take advantage of the town's pre-existing infrastructure to save capital and harness mature industries in the area.

¹⁸ Leanna Garfield, "Facebook and Amazon Are so Big They're Creating Their Own Company Towns - Here's the 200-Year Evolution," Business Insider, March 26, 2018, <https://www.businessinsider.com/company-town-history-facebook-2017-9>.

Table 1: Types of historical and modern company towns selected for analysis.

Time Period/Factors	<i>Tabula rasa</i>	<i>Takeover</i>
<i>Historical</i>	Pullman, Chicago, Illinois, USA	Ludwigshafen, Rhineland-Palatinate, Germany
<i>Modern</i>	Silicon Valley, San Francisco, California, USA	San Bernardino, California, USA

In table 1, several exemplary models of company towns have been identified, based on time period and development types. A rationale is presented below.

2.3 Pullman: A Grand Social Experiment

Pullman Town was not the only company town of its day, but was part of a planned community commonly known as *model towns*. As a subset of company towns characterised by paternalistic desires, it was chosen not only for the complex multilayered relationships between employer and employee acting simultaneously as feudal landlord and serf, but also for its enormous significance as a site for labour rights history in the United States. Borges and Torres suggest that Pullman Town has arguably gained the most contemporary and scholarly interest out of all company towns.¹⁹ Built by the eponymous businessman George Pullman, for his Pullman Palace Car Company manufacturing workers, Pullman Town was not only conceived as a social experiment envisioned as a capitalist utopia, but was the site of the Pullman Strike, which was caused

¹⁹ Borges and Torres, *Company Towns: Labour, Space and Power Relations across Time and Continents*, p. 12.

directly by the Panic of 1894.²⁰ Therefore, Pullman will be examined for its unique development not only as a town run by paternalist desires, but also at its point of conflict and decline.

2.4 San Bernardino: Improvise, Adapt, Overcome

As the world's largest e-commerce retail giant, Amazon manifests spatially through shipping operations most visibly through a sprawl of logistical distribution centres in the Inland Empire, California, making it the largest employer in the region and establishing it as the company's regional shipping hub.²¹ Workplace practices have earned the company a notorious reputation as an intensive work environment.²² Media headlines, such as '*Amazon is Creating Company Towns Across the United States*' (Jacobin Magazine); or alternatively, '*Amazon's New 'Factory Towns' Will Lift the Working Class*' (Bloomberg) identified San Bernardino as a site of labour action, and rapid company growth.²³ In contrast to Pullman, built on vacant land, Amazon moved into San Bernardino to take advantage of pre-existing infrastructure.²⁴ Thus, its current spatial presence in San Bernardino will be scrutinised.

2.5 Silicon Valley: Reviving Corporate Enclaves

Sheheryar Kaoosji notes that Amazon enjoys a unique disposition as the only big tech company in charge of a significant blue-collar workforce.²⁵ Silicon Valley, home to tech giants including Apple, Google (now Alphabet), and Facebook (now Meta), is characterised by corporate campuses surrounded by suburban

²⁰ Jane Eva Baxter, "The Paradox of a Capitalist Utopia: Visionary Ideals and Lived Experience in the Pullman Community 1880–1900," *International Journal of Historical Archaeology* 16, no. 4 (2012): 651–65, <https://doi.org/10.1007/s10761-012-0196-8>.

²¹ Abe Asher, "Amazon Is the Largest Employer in California's Inland Empire. Workers There Want a Union.," Jacobin, September 21, 2022, <https://jacobin.com/2022/09/amazon-inland-empire-california-workers-union-organizing>.

²² Asher, "Amazon Is the Largest Employer in California's Inland Empire. Workers There Want a Union.," 2022.

²³ Press, "Amazon Is Creating Company Towns across the United States," 2021.; 1. Conor Sen, "Amazon's New 'Factory Towns' Will Lift the Working Class," Bloomberg Opinion, September 16, 2021, <https://www.bloomberg.com/opinion/articles/2021-09-16/amazon-s-new-factory-towns-will-lift-the-working-class>.

²⁴ Kenneth J. Schoon, *Pullman: The Man, the Company, the Historic Park* (Charleston, SC: The History Press, 2021), p. 54.

²⁵ Sheheryar Kaoosji, "Worker and Community Organising to Challenge Amazon's Algorithmic Threat," essay in *The Cost of Free Shipping: Amazon in the Global Economy*, ed. Jake Alimahomed-Wilson and Ellen Reese (London, UK: Pluto Press, 2020), 194–205, p. 196.

sprawl. As the area lacks typical enjoyments found in city areas, companies built living necessities to support employees. For instance, Facebook's Menlo Park campus is planned as a private town, complete with employee housing, transportation, independent retailers and a hotel.²⁶ Google's campus at Mountain View, California, will be examined as a case of how space reinforces a unique workplace culture with downsides at the same time.

2.6 Ludwigshafen: Upholding Corporate Social Responsibility?

Ludwigshafen is a site of enormous German and international worldwide industrial importance. Not only is it headquarters to BASF, the world's largest chemical producer, but is the site of BASF's integrated chemical manufacturing complex covering ten square kilometres: a size comparable to the Azovstal steelworks in Mariupol, Ukraine. Like its Silicon Valley counterparts, BASF has contributed infrastructure, building infrastructure such as a hotel, restaurants, resort house, and even a wine cellar, suggesting a better work life balance. Ludwigshafen's interlinked history with BASF will be examined as an example to improve modern archetypal American company towns. Ludwigshafen was chosen out of personal significance to the author, who lived in Mannheim from 2011 to 2012 to support their father, who worked for BASF in Ludwigshafen and is therefore familiar to the author.

2.7 Methodology: Spatial Analysis

A methodology inspired by the book *Learning from Las Vegas* (1972) by Robert Venturi, Denise Scott Brown and Steven Izenour, which opened new avenues of discourse on architecture for its groundbreaking perspective on iconography in urban sprawl, was adopted for this study.²⁷ Like Venturi et al., roughly two weeks were spent in dataspace gathering preliminary information through books, academic journals and

²⁶ Avery Hartmans, "Facebook Is Building a Village That Will Include Housing, a Grocery Store and a Hotel," Business Insider, July 7, 2017,

<https://www.businessinsider.com/facebook-building-employee-housing-silicon-valley-headquarters-2017-7>.

²⁷ Robert Venturi, Scott Denise Brown, and Steven Izenour, *Learning from Las Vegas* (Cambridge, MA: The MIT Press, 2017), p.10.

online queries through the University of Toronto's library network, and databases such as JSTOR, and Avery Index.

Thanks to generous patronage by the Laidlaw Foundation, a grant of CAD\$5000 made travel abroad possible. However, budgets constrained the opportunity to visit all locations, especially Ludwigshafen. As a result, Ludwigshafen and Silicon Valley were not visited in person; the former due to language constraints and cost, while the latter consisted of private campuses that are usually closed to the public. Therefore, Chicago and San Bernardino were nominated for in-person documentation. Six days were spent in Chicago, while four days were spent in San Bernardino over the course of late June and early July, 2023.

Visiting locations in person had concrete benefits. One was able to document real life conditions. For example, typology of different buildings were compiled through hand sketches, extensive photo and video coverage of urban planning, and interacting with local surroundings in San Bernardino. Primary literature sources were accessed through the Regenstein Library's stacks at the University of Chicago, on top of accessing antique maps through Chicago's library system, and interviewing park rangers at Pullman National Historic Park.

Upon returning to Toronto, further research ensued in dataspace. Information on BASF establishments in Ludwigshafen were made available through the Eberhard Zeidler Library's periodical stacks, while remaining information was gathered through online news articles and journals on Silicon Valley and Ludwigshafen.

2.8 Limitations of Study

This study is limited by several factors. While the author examines company towns as a physical result of socio-historical phenomena influenced by a background in architectural theory, company towns are more often than not, the result of economics and law. As the author possesses a rudimentary background in these fields of study, any analysis made using them as a baseline for comparison may not be accurate.²⁸

In addition, the visit originally aimed to make use of more opportunities in person. Attempts to secure interviews with Amazon union workers, economic history professors at UChicago, and a visit to an Amazon distribution centre in San Bernardino were made, but were unsuccessful for various reasons. The inability to visit Ludwigshafen and Silicon Valley in person hampered the immersive understanding that was gained when visiting Pullman and San Bernardino. Therefore, these latter sections lack depth compared to the former two.

It is also worth noting that three of four locations in this study are located in the United States. While company towns exist across the world, studying American sites provides a consistent legal and economic framework to compare historical precedents against one another. Therefore, while observations may not apply to international company towns, it will suggest solutions relevant to an American context.

2.9 Findings

This report consists of two parts; a description of the architecture and history at the above locations, and a discussion of findings made by comparing company towns with each other. Visual elements and literature are used in tandem for a clearer form of representation.

²⁸ For instance, the terms ‘corporation’ and ‘company’ etc. are used colloquially, ignoring the nuanced differences between the two. Some economic factors used for comparisons, such as turnover rates, may be used without considering other economic metrics, such as voluntary versus involuntary attrition as this is not the focus of the study.

All in all, this study finds that the forms of control corporations are able to exert over their employees have changed due to changes in laws and urban planning that weakened a company's influence over employees in terms of spatial influence. However, the amount of control that corporations sought over employees was in any way, shape and form, used to maximise employee productivity.

On top of that, corporations may face incentives to retain employees based on their skill sets, which increases or decreases an employee's indispensability to the company. Where employees were easily replaced, investments in employee well-being were negligible, which also translated into a lack of corporate investment in the surrounding area observed in San Bernardino. Welfare for low-value employees was the main form of company support found in these areas.

However, where employees are perceived as high value assets to companies in financially sustainable conditions, companies mobilised company town infrastructure to physically better their employees welfare and well-being, in Pullman and Silicon Valley. A similar conclusion can be made with Ludwigshafen; but BASF arguably has its own unique reasons to beholden itself to the surrounding area.

3. Case Study 1: Pullman, Chicago, Illinois, USA

3.1 Observations: Pullman Town

Professor Kenneth Schoon asserts that in the wake of George Pullman's death, he was chiefly remembered as an inventor, rather than a philanthropist that donated generously to various social causes.²⁹ This could be no further from the truth. While the Pullman Palace Car Company cemented sleeper cars as an indispensable

²⁹ Schoon, *Pullman: The Man, the Company, the Historic Park*, p.104.

module of long-distance train travel, Pullman was no inventor. But to say he was not remembered as a philanthropist contradicts his style of business too.³⁰

Pullman sleeper cars were amongst the first in the train carriage market to provide luxury sleeping quarters and more, diminishing the allure of less luxurious sleeper cars: first prototypes such as the *Delmonico* introduced both dining and sleeping modes to the train car market in 1868. Over time the demand for Pullman sleeper cars ballooned. Pullman car assembly workshops were scattered across North America: some in Detroit, some in Ontario, and restricted the Pullman Car Company to produce 114 cars per year.³¹ By creating a new purpose-built production complex in Chicago, Mr. Pullman could concentrate production, manage the plant closely, and deliver to Chicago-based clients.³² Locating this new plant south of Chicago, where largely undeveloped land was cheaper, allowed Pullman to build strategically beside Lake Calumet to the town's east as an accessible industrial water source; and to the town's west, the Illinois Central Railroad for accessibility to central Chicago shown in Figure 1.³³ Although positioning the plant on the outskirts of Chicago presented a relatively remote presence apart from two outlying towns, Kensington and Roseland. This created a need to house workers, and provide them with other means of living. As such, Pullman saw a new opportunity to practise personal philanthropy.

³⁰ Ibid.

³¹ Ibid, p. 39-40.

³² Ibid, p. 48.

³³ Ibid, p. 53

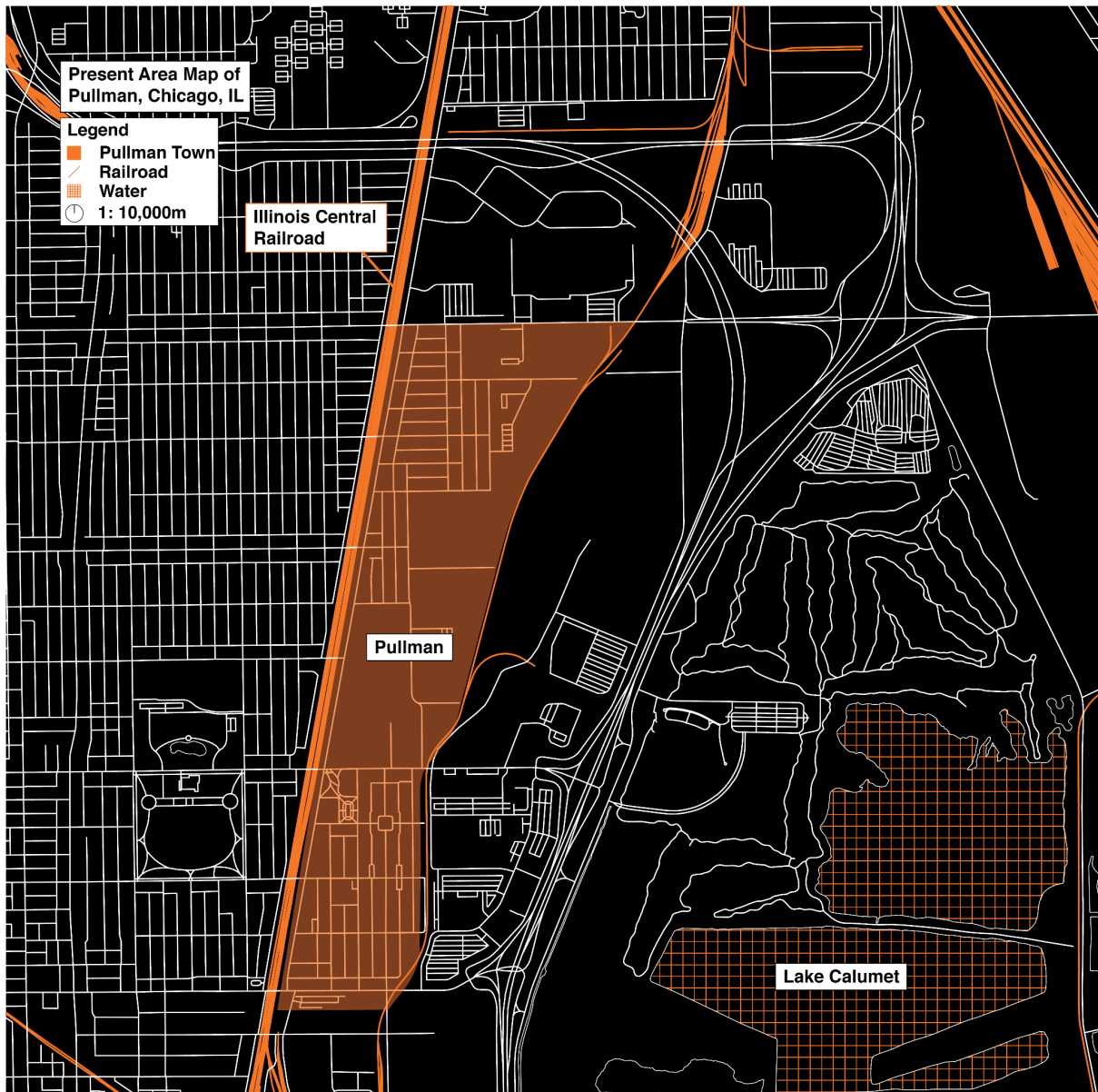


Figure 1. *Present-day figure-ground area map of Pullman, Chicago labelled with important infrastructure for railcar manufacturing in the 19th century.*³⁴

In 1884, Pullman Town was established as the first cooperative model town in the United States.³⁵ Unlike previous company towns, Pullman was built as a planned community, designed by the architect S.S. Beman, landscape architect Nathaniel Barrett, and civil engineer Benzette Williams.³⁶ The result was a town built for

³⁴ Not to scale: 4km by 4km area in Figure 1 has been scaled by a factor of 10,000 on a 40 by 40cm page and adjusted to fit for an 8.5x11" page. This applies to other figures in this paper as well.

³⁵ Terri Martin Wright, "A Community in a Garden: The Pullman Paradigm in Southern Illinois," *Journal of the Illinois State Historical Society* 91, no. 3 (Autumn 1998): 113–32, <https://www.jstor.org/stable/40193251>, p.116

³⁶ Schoon, *Pullman: The Man, the Company, the Historic Park*, p.56.

workers but contained characteristics of the City Beautiful movement reserved for grand urban plans, such as Hausmann’s renovation of Paris (1853-1870). The town enjoyed tree-lined avenues, open green spaces, as well as front and back yards for residential housing.³⁷ On top of that, Pullman was designed as a genuine community with state-of-the-art utilities. Figure 2 presents the difference between an average Chicagoan tenement and various Pullman residential units at the time on the scale of an individual land parcel respectively. It included a schoolhouse, parks, playing fields, a firehouse, railroad station, horse stables, a hotel, marketplace, a church, and an Arcade housing a bank, theatre and library.³⁸ While Chicago proper was plagued with a lack of indoor plumbing, cramped conditions and health epidemics, Pullman was equipped with gas, water, indoor plumbing, working sewer systems and garbage disposal, demonstrating a level of cleanliness yet to be seen in lower class neighbourhoods at the time.³⁹

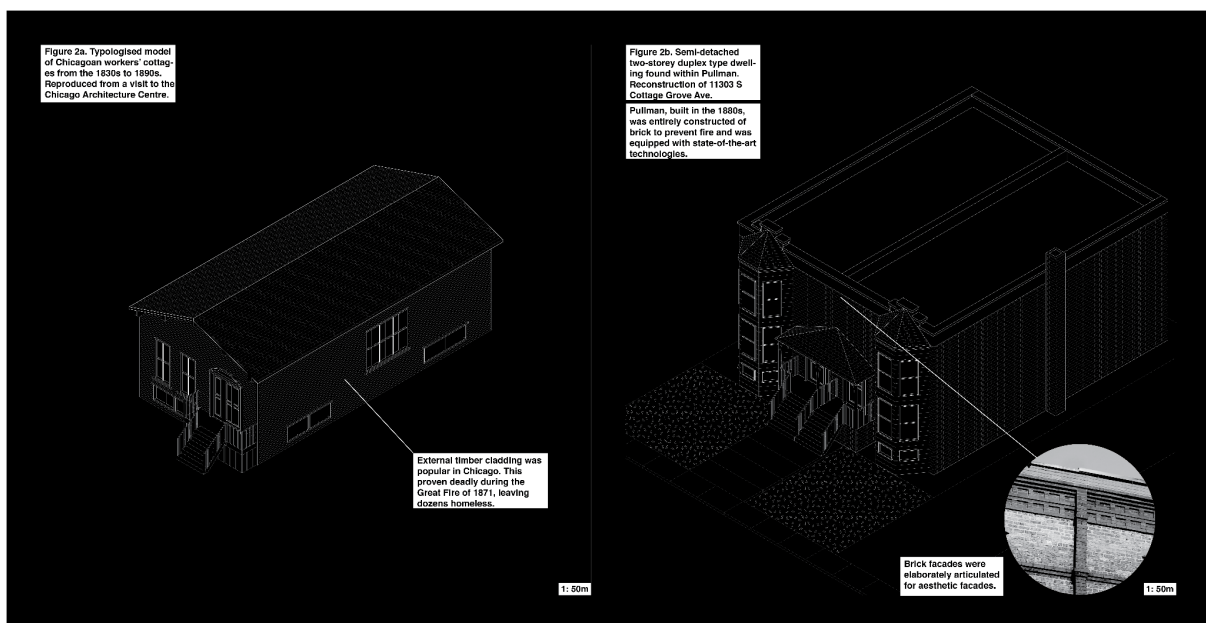


Figure 2. *Typological comparison between Chicagoan workers’ cottages and Pullman duplexes from the 1880s.*

³⁷ Ibid.

³⁸ Cheryl Hudson, “The ‘Un-American’ Experiment: Jane Addams’s Lessons from Pullman,” *Journal of American Studies* 47, no. 4 (2013): 903–23, <https://doi.org/10.1017/s0021875813001370>, p.907.

³⁹ Hudson, “The ‘Un-American’ Experiment: Jane Addams’s Lessons from Pullman,” p.907.; Margaret Garb, “Health, Morality, and Housing: The ‘Tenement Problem’ in Chicago,” *American Journal of Public Health* 93, no. 9 (September 2003): 1420–30, <https://doi.org/10.2105/ajph.93.9.1420>.

3.2 Creating Pullman Town

Why Mr. Pullman was motivated to establish a radically progressive architecture in Pullman Town can be debated from several perspectives. The first of note is to view Pullman Town as an act of enlightenment aimed at uplifting workers into a wholesome, healthy community as a role model for societies. A second, more cynical perspective could be from Mr. Pullman's desire to avoid a trend in increasingly hostile conflicts between labourers and employees. However, the latter lends more weight in understanding the means of corporate control over the town.

With respect to the former, Mr. Pullman was described as a religious and civic-minded citizen.⁴⁰ Principles of Christianity Universalism arguably impressed itself on Pullman to create a society with wholesome values. Indeed, Pullman donated considerably to charities until his death, while serving a leading role on aid and cultural organisations at the same time.⁴¹ Building Pullman would have distanced its workers from the physical and moral ills of downtown Chicago, which would have contradicted Pullman's Christian values. Furthermore, Pullman believed that well-designed, beautiful residential surroundings would encourage good character in the residents, as well as cleanliness, industrious work ethic and sobriety in the workforce.⁴² According to social worker Jane Addams, Pullman took genuine pride in his model town, a project that "he had built with such great care", demonstrating strong personal investment from Pullman.⁴³ This is good rationale to support the portrayal of Mr. Pullman as an enlightened industrialist.

But while George Pullman could have built Pullman town out of an impassioned desire to improve labour conditions, Pullman was a very costly investment, racking up a total bill of eight million US dollars at the

⁴⁰ Schoon, *Pullman: The Man, the Company, the Historic Park*, p.42.

⁴¹ Ibid, p. 42; p. 104.

⁴² Wright, "A Community in a Garden: The Pullman Paradigm in Southern Illinois," p. 122.

⁴³ Hudson, "The 'Un-American' Experiment: Jane Addams's Lessons from Pullman," p.907.

time—today’s equivalent of USD\$238 million.⁴⁴ Altruism alone is an unlikely deciding factor in such a large investment. This leads to the second perspective.

Prior to the town’s establishment, the United States witnessed a series of increasingly violent labour strikes. The Great Railroad Strike of 1877, caused by wage reductions, ended in riots with the federal army intervening, a hundred people killed and over a thousand people jailed.⁴⁵ In a blow to railroad businesses, it lasted three weeks and was valued at over at least six million dollars of lost business and property damage.⁴⁶ The 1877 Strike also laid way to a greater labour movement across the US, with skyrocketing union memberships and the development of railroad brotherhoods.⁴⁷ For Mr. Pullman, Pullman Town embodied a new system which would avoid previous conflicts.⁴⁸ George Pullman declared Pullman Town as an ambitious social experiment dedicated to solving labour-capital conflicts based on “lines of mutual recognition.”⁴⁹ In contrast to the enlightened industrialist argument, Mr. Pullman went as far to deny any interest in philanthropy.⁵⁰ The experiment could be seen as a precursor to Taylorism given an express interest in labour efficiency instead. In Pullman’s progressive living environment, workers would be healthier. Healthier workers would fall ill less often, increasing manufacturing productivity and efficiency. Healthier workers made for happier workers, which ensured *cooperation* between employees and the company. In living conditions that went above and beyond the national status quo, one would find it unnecessary to join a union or go on strike. Rather, it was argued that labour and capital actually shared the same interests.

The ‘Pullman theory’ had concrete benefits on paper, but in reality these went beyond manufacturing efficiencies. Constructing Pullman Town benefitted Mr. Pullman’s company and personal reputation

⁴⁴ “The Town of Pullman,” Pullman History Site, accessed August 6, 2023, <https://www.pullman-museum.org/theTown/>; “Inflation Rate between 1880-2023: Inflation Calculator,” \$8,000,000 in 1880 → 2023 | Inflation Calculator, accessed August 6, 2023, <https://www.in2013dollars.com/us/inflation/1880?amount=8000000>.

⁴⁵ Jessica Piper, “The Great Railroad Strike of 1877: A Catalyst for the American Labor Movement,” *The History Teacher* 47, no. 1 (November 2013): 93–110, <https://www.jstor.org/stable/43264188?seq=1>, page 95.

⁴⁶ Piper, “The Great Railroad Strike of 1877: A Catalyst for the American Labor Movement,” p. 95.

⁴⁷ *Ibid*, p. 96.

⁴⁸ Schoon, *Pullman: The Man, the Company, the Historic Park*, p.53.

⁴⁹ Hudson, “The ‘Un-American’ Experiment: Jane Addams’s Lessons from Pullman,” p.907.

⁵⁰ Wright, “A Community in a Garden: The Pullman Paradigm in Southern Illinois,” p. 122.

greatly in what historians Reiff and Hirsch described as a trend of corporate engagement of image-making since the late 19th century.⁵¹ Not only did Mr. Pullman advertise Pullman Town liberally in domestic and foreign newspapers, but intensified publicity during the 1893 Columbian World Expo.⁵² Joining the Expo's executive committee allowed him to lead fairgoers from the Expo, situated at 59th Street, to take a 15-minute ride by double-decker streetcar and see Pullman town in person.⁵³ This made Pullman Town one of Chicago's top tourist attractions and served as good publicity for Pullman Town - and by extension, George Pullman himself through eponymous branding.⁵⁴ Mr. Pullman's reputation increased domestically and nationally, welcomed in Europe as a 'friend and benefactor of workingmen'.⁵⁵ This would ensure the Pullman Company's attractiveness as a workplace for potential employees, while a docile workforce would help the Pullman Company present an image of stability for B-to-B clients. Above all, Pullman Town enhanced Pullman Man's own image. George Pullman was seen as a visionary employer who not only provided for weary travellers, but for the families whose breadwinners made comfortable rail travel possible.⁵⁶ This clearly contradicts Schoon's portrayal of Pullman and Pullman's personal statements as an unassuming philanthropist.⁵⁷ In hindsight, Pullman cultivated an image nothing short of a cult of personality by building his town.

Pullman Town was more than a planned community. It was part idealism, part publicity stunt and mainly corporate venture that viewed employees as investment vehicles with expectant returns that came to excessively curb Pullman employees' freedoms in 1894. The fact that Pullman Town cost USD\$8 million whereas the Company was valued at USD\$36 million (without adjusting for inflation) by 1894, could hardly

⁵¹ Janice L. Reiff and Susan E. Hirsch, "Pullman and Its Public: Image and Aim in Making and Interpreting History," *The Public Historian* 11, no. 4 (Autumn 1989): 99–112, <https://www.jstor.org/stable/3378069>, p. 100.

⁵² Schoon, *Pullman: The Man, the Company, the Historic Park*, 2021, p.88.; Ibid, p. 93.

⁵³ Ibid, p. 93-94.

⁵⁴ Ibid.

⁵⁵ Hudson, "The 'Un-American' Experiment: Jane Addams's Lessons from Pullman," p.907.

⁵⁶ Reiff and Hirsch, "Pullman and Its Public: Image and Aim in Making and Interpreting History," 1982, p.105.

⁵⁷ Schoon, *Pullman: The Man, the Company, the Historic Park*, 2021, p.104.

be overlooked as a charitable act.⁵⁸ Mr. Pullman himself proclaimed that the town was an investment built to provide the corporation with extra profits.⁵⁹ In order to gain a 6 percent return on housing investments, the Pullman Company charged Pullman residents for rent, heat, gas and water.⁶⁰ However, these rents were 20 to 25% above market rates for similar lodgings in Chicago.⁶¹ Additional profits were made from other amenities, such as the Hotel Florence — a lavish hotel built for ‘the aristocracy of Pullman’ that turned a profit in its first year.⁶² While Pullman Palace Car Co. never used orthodox exploitative practices like paying workers in scrip and hosting a single company store, the Company further extracted value from its town by charging private vendors to rent at its town marketplace and the Arcade.⁶³ Furthermore, the Pullman Company profited substantially from utility sales, such as gas. While gas sold for \$1.25.⁴⁵ in Chicago per thousand cubic feet, it sold in Pullman for \$2.25, whereas the actual cost of gas manufacturing in Pullman cost the Pullman Company \$0.63^{1/4}/cubic thousand feet at most.⁶⁴ Ergo, the Company was able to minimise cash outflow by indirectly owning employee-patronised services and markup on goods, demonstrating a subtle but significant amount of control over employees thanks to a monopoly on commercial outlets that the Company maintained through control over Pullman Town.

3.3 Pullman: A Private Venture’s Downfall

Control in Pullman Town stemmed from strategic territorial establishment that avoided the Chicago city government for multiple reasons.

⁵⁸ “The Town of Pullman.”; W. J. Ashley, “The Railroad Strike of 1894. The Statements of the Pullman Company and the Report of the Commission, Together with an Analysis of The Issues.,” *Publications of the Church Social Union*, B, no. 1 (April 1, 1895): 1–46, <https://hdl.handle.net/2027/uc1.c047898395>. P. xxii.

⁵⁹ Schoon, *Pullman: The Man, the Company, the Historic Park*, p.93.

⁶⁰ *Ibid*, p. 81.

⁶¹ Harvey Wish, “The Pullman Strike: A Study in Industrial Warfare,” *Journal of the Illinois State Historical Society (1908-1984)* 32, no. 3 (September 1939): 288–312, <https://www.jstor.org/stable/40187904>.

⁶² *Ibid*, p. 68.

⁶³ *Ibid*, p. 68-70; “Fact or Fiction: Did Pullman Use Scrip? (U.S. National Park Service),” National Parks Service, accessed August 7, 2023, <https://www.nps.gov/articles/000/fact-or-fiction-did-pullman-use-scrip.htm>.

⁶⁴ Almont Lindsey, “Paternalism and the Pullman Strike,” *The American Historical Review* 44, no. 2 (January 1939): 272–89, <https://doi.org/10.1086/ahr/44.2.272>, p.280.

Figure 3. *Chicago city limits imposed upon a map of modern-day Chicago, prior to the City's annexation of Hyde Park Township.*



Source: Adapted from Samuel Augustus Mitchell's 1876 map of Chicago.⁶⁵

⁶⁵ 1. S. Augustus Mitchell, *Chicago.*, map, accessed August 30, 2023, https://luna.lib.uchicago.edu/luna/servlet/detail/UCHICAGO~2~2~379~1231857:Chicago-?qvq=q:_luna_media_exif_filename%3DG4104-C6-1876-M5.tif;lc:UCHICAGO~6~6,uofclibmgr2~10~10,UCHICAGO~20~20,uofclibmgr2~7~7,uofclibmgr2~5~5,uofclibmgr2~3~3,UCHICAGO~12~12,UCHICAGO~19~19,uofclibmgr2~4~4,UCHICAGO~15~15,uofclibmgr2~9~9,UCHICAGO~17~17,UCHICAGO~18~18,UCHICAGO~2~2,UCHICAGO~3~3&mi=0&trs=1.

Figure 3 shows the location of Pullman, situated far beyond Chicago's city limits in 1876. During its conception, Pullman Town belonged to Hyde Park Township, so it was not totally unincorporated.⁶⁶ Nonetheless, it was sparsely settled and gave considerable leeway towards its constituent communities, even after Pullman was built. The township largely ignored activities in Pullman and vice versa.⁶⁷ Dealings with Hyde Park were relegated to the courtroom and two policemen.⁶⁸ Thus, the Pullman Company enjoyed a high degree of municipal autonomy thanks to an administrative body reluctant to intervene. Furthermore, the Pullman Land Association owned all land parcels, streets and buildings in the town, essentially acting as a large plot of privately-owned publicly accessible spaces (POPS).⁶⁹ Instead of state authorities, the town was staffed by company officials who granted an extra layer of political autonomy for the Pullman Company, but not to its employee-residents.⁷⁰ For instance, the chief corporate administrator acted as the town agent, who was responsible for coordinating the work of eleven municipal departments and maintaining the town's commercial behaviour.⁷¹ Virtually all operations except retail businesses were company-managed.⁷² Since George Pullman led an overwhelming influence in his company, he exerted his own idea of governance upon town residents. While Pullman came to employ over 5,500 workers, only one church — the Greenstone Church — was built with the hope of merging all existing Christian denominations under one roof.⁷³ Whereas the Presbyterians were the only ones to rent it at high cost, Catholic and Swedish Lutheran denominations opted to rent undesirable venues in the Arcade, the Casino and the Marketplace Building instead.⁷⁴ Eventually, a personal feud between Catholic priest John Waldron and George Pullman resulted in Waldron's resignation from his pastorate.⁷⁵ The religious situation, as well as other conflicts that defied Mr.

⁶⁶ Stanley Buder, "Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930" (thesis, University of Chicago, 1966),

<https://www.proquest.com/docview/302242127?fromopenview=true&pq-origsite=gscholar>; p. 146.

⁶⁷ Buder, "Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930," p. 146-147.

⁶⁸ Ibid.

⁶⁹ Schoon, *Pullman: The Man, the Company, the Historic Park*, p. 96-97.

⁷⁰ Buder, "Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930," p. 150.

⁷¹ Lindsey, "Paternalism and the Pullman Strike," 1939, p. 276.

⁷² Ibid.

⁷³ Ibid; p. 285,

⁷⁴ Ibid; p.283.

⁷⁵ Ibid.

Pullman's vision and subsequent attempts to stifle them generated dissatisfaction in the town. For instance, mundane acts such as sitting on front porches, leaving homes 'improperly attired', and large outdoor gatherings were all prohibited, pointing towards Marxist alienation.⁷⁶ Already in 1885, the visiting economist Richard Ely came to write the following quote:

“Nobody regards Pullman as a real home [...] It is benevolent, well-wishing feudalism, which desires the happiness of the people, but in such way as shall please the authorities [...] The power of Bismarck in Germany is utterly insignificant when compared with the power of the ruling authority of the Pullman Palace Car Company in Pullman. 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...”⁷⁷

When the township came under scrutiny from Chicago officials, a referendum to join the City was held in 1889.⁷⁸ Mr. Pullman vehemently opposed this move on the basis that annexation would allow political interference to undo Pullman's achievements.⁷⁹ The referendum resulted in 62% of the vote in favour of annexation.⁸⁰ However, in stark contrast to the township, 76% of Pullman residents opposed annexation.⁸¹ This led Pullman's opponent, John Patrick Hopkins (who would become future Chicago Mayor, 1893-1895) to allege that political intimidation by company foremen to vote against annexation had occurred.⁸²

Anybody who did not agree with the Pullman Company's practices, including political interference, was offered the option to quit.⁸³ However, as Pullman employees were the only residents allowed to live in

⁷⁶ Baxter, “The Paradox of a Capitalist Utopia: Visionary Ideals and Lived Experience in the Pullman Community 1880–1900,” p.659.

⁷⁷ Richard T. Ely, “Pullman: A Social Study,” *Harper's Magazine* 70 (February 1885): 452–66, <https://wayback.archive-it.org/2566/20211028212603/http://urbanplanning.library.cornell.edu/DOCS/pullman.htm>.

⁷⁸ Buder, “Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930,” p. 151.

⁷⁹ *Ibid.*

⁸⁰ Schoon, *Pullman: The Man, the Company, the Historic Park*, p. 97.

⁸¹ *Ibid.*

⁸² Buder, “Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930,” p. 150.

⁸³ Schoon, *Pullman: The Man, the Company, the Historic Park*, p. 95.

Pullman, resignation or termination resulted in a *de facto* eviction from Pullman Town.⁸⁴ Throughout the town's existence, the Pullman Company had no intent on surrendering its right to evict as a private property owner. While the Pullman Land Association rented out units, and the Pullman Bank offered mortgages in neighbouring town Rosedale, there was no intent whatsoever to allow employees the option to own their own homes.⁸⁵ This would have diminished the Pullman Company's own influence by fostering unwelcome charges or political views, which they enforced by preventing opponents from leasing meeting halls in Pullman Town for political rallying.⁸⁶ This shows how Pullman abused its corporate responsibility to workers to achieve its own political aims.

Ultimately, the very control that enabled the Pullman Company to improve living conditions for labourers was further abused during the Pullman Strike of 1894. During the Panic of 1893, orders for Pullman sleeper cars decreased substantially as railroad companies reduced their demand for rolling stock.⁸⁷ Despite this, the Company's second and more profitable operating division, continued to yield revenue, buoying the Company.⁸⁸ While Pullman could have used profits from the operating division, or profits from the 1893 fiscal year to cushion manufacturing losses, he instead ordered wage cuts in both divisions.⁸⁹ Nevertheless, his officials' salaries were left unchanged, and so were Pullman rents.⁹⁰ This squeezed Pullman employee residents' finances seriously. In May of 1893, T.W. Heathcoate, an inside finisher, worked roughly 252 hours and earned USD\$78 dollars. But by March of 1894, 262 hours of work only netted Heathcoate USD \$51.53. Wage cuts severely reduced their purchasing power.⁹¹

⁸⁴ Schoon, *Pullman: The Man, the Company, the Historic Park*, p. 82.

⁸⁵ *Ibid.*

⁸⁶ Buder, "Pullman: An Experiment in Industrial Order and Community Planning, 1880-1930," p.152.

⁸⁷ Lindsey, "Paternalism and the Pullman Strike," 1939, p. 286.

⁸⁸ *Ibid.*

⁸⁹ *Ibid.*

⁹⁰ *Ibid.*

⁹¹ W. J. Ashley, "The Railroad Strike of 1894. The Statements of the Pullman Company and the Report of the Commission, Together with an Analysis of The Issues," p.xxxiv.

So reduced were residents' cuts, that following unsuccessful negotiations with George Pullman, employees saw no choice but to go on strike with the support of the American Railway Union (ARU) to demand the investigation of shop abuses, to reduce rent and to restore original wages.⁹² Because members of the ARU refused to operate trains with Pullman cars attached, the strike shut down Chicago's railroad network, which was then the railroad hub of the United States and brought the country to a logistical standstill.⁹³ The ARU met with stiff resistance from the Pullman Company and the General Managers' Association (GMA), who attached mail cars to trains pulling Company cars in order to trigger a federal injunction against the obstruction of mail.⁹⁴ As a result of federal intervention, the Pullman Strike ended with twelve dead, the strike leaders jailed and workers returning to their posts in exchange for surrendering of ARU membership and the same post-depression working conditions offered by Pullman.⁹⁵ However, it also ended with a federal inquiry by the United States Strike Commission as an investigation into the causes of the Pullman Strike, which called the town 'un-American' and laid the precedent for Pullman Town's decline.⁹⁶

3.4 Concluding Observations from Pullman Town

Although the Pullman Strike failed, it undeniably demonstrated that the Pullman Experiment, designed to avoid the very conditions that Pullman Town aimed to avoid — a violent, prolonged strike — ended up inciting. Pullman arguably failed for its commercial tactics, ranging from price gouging, excessively enforcing community rules, controlling spaces of socialisation in the name of a) enforcing Mr. Pullman's vision of uplifting workers through a healthy and stimulating environment and b) generating profits. For the former, Pullman's paternalism overreached what was expected of an employer, whereas for the latter, the highly unpopular move to reduce wages but keep rents constant during the economic depression in 1894

⁹² Ibid, p. 287.

⁹³ Ibid.

⁹⁴ Schoon, *Pullman: The Man, the Company, the Historic Park*, p. 100.

⁹⁵ Johnathan Bassett, "The Pullman Strike of 1894," *OAH Magazine of History* 11, no. 2 (1997): 34–41, <https://doi.org/10.1093/maghis/11.2.34>, p. 41.;

⁹⁶ Ashley, "The Railroad Strike of 1894. The Statements of the Pullman Company and the Report of the Commission, Together with an Analysis of The Issues."

was the last straw for Pullman residents. This move was representative of a predatory economic system that presented Pullman Town as an exemplary model to the outside world using physical infrastructure to promote an image that made critical reports of the social structure non-credible. On top of that, Pullman residents were charged the same rent evidencing the Pullman Company's view of their employee residents as investment vehicles without consideration for their welfare before and after the strike.

While the Pullman Company's right to private property made physical infrastructure and social services possible, the distinction between private and public services was blurred. It was mainly the way in which the Pullman Company could enforce their policies on private property without opposition or consultation from town residents, as well as company policies, that caused the Pullman Experiment's downfall.

Therefore, physical infrastructure laid the groundwork for dissatisfaction with Pullman services in the town.

Likewise, San Bernardino represents a site of labour action against Amazon.com, Inc., which has come to gain influence within the city and greater region as a major employer with forays into social benefit programmes. However, its style of regional management is a sharp break from Pullman Town, which will be explored in the next part.

4. Case Study 2: San Bernardino, California, USA

4.1 San Bernardino: Historical Overview, Urban Observations

Ever since European American settlements were established along the West Coast, San Bernardino has emerged with an arrangement of transport infrastructure that makes it highly desirable for Amazon's logistical purposes today. This includes rail transport, highway and air transport infrastructure that made San Bernardino highly attractive in terms of logistical efficiency.

In the late 19th and 20th century San Bernardino relied on several industries, namely mining, lumbering, and citrus production.⁹⁷ The citrus production industry was of particular importance to the Inland Empire, where the six Southern California counties contained 90% of total citrus acreage in the Golden State.⁹⁸ As an ‘exotic fruit’ during the late 19th century, it was exported towards the inland United States by rail; or exported towards the West Coast by railroad before being loaded onto ships for naval shipping.⁹⁹ By the 1930s it was California’s principal agricultural product.¹⁰⁰ In the early 20th century it expanded massively both economically and culturally. The National Orange Show was first held in 1911 by San Bernardino businessmen intent on introducing the ‘exotic crop’ worldwide.¹⁰¹ From 1830 to 1960, California came to produce 60% of national citrus production, as well as 20% of global supply.¹⁰² Thus, citrus solidified San Bernardino and its neighbouring towns as an important part of Californian agriculture in the early 20th century as an exporting industry. With the use of two railroads; the Southern Pacific railroad, and the Santa Fe Railroad, by 1920 the San Bernardino County exported more than 125,000 carloads of citrus on an annual basis in what can be seen as a mutually beneficial relationship between railroad companies and citrus producers.¹⁰³ Not only did the citrus industry establish a strong relationship with railroad infrastructure leading to the inland US, but also connected a route to the Port of Long Beach, which grew steadily as an important international naval shipping hub. Along these routes, various communities grew including but not limited to Pasadena, Riverside, Orange County, San Bernardino, Glendora, Claremont and Pomona.¹⁰⁴

⁹⁷ “Museum Map,” San Bernardino County Museum, accessed August 10, 2023, <https://museum.sbcounty.gov/museum-map/>.

⁹⁸ Gilbert G. Gonzalez, “Labor and Community: The Camps of Mexican Citrus Pickers in Southern California,” *The Western Historical Quarterly* 22, no. 3 (August 1991): 289–312, <https://doi.org/10.2307/969750>, p.290.

⁹⁹ “Pulp Culture: A Juicy Tale of the Orange Empire” (San Bernardino: San Bernardino County Museum, 2019).

¹⁰⁰ Gonzales, “Labor and Community: The Camps of Mexican Citrus Pickers in Southern California,” p. 290.

¹⁰¹ “National Orange Show,” City of San Bernardino California, accessed August 10, 2023, https://www.sbcounty.org/about/history/national_orange_show.

¹⁰² Ibid.

¹⁰³ California Genealogy, “Railroads of San Bernardino County, California,” California Genealogy, June 4, 2019, <https://californiagenealogy.org/sanbernardino/railroads.htm>; Galvin Preservation Associates, rep., *Historic Context for The City of Ontario’s Citrus Industry* (Redondo Beach, California: GPA Consultants, 2007), p.12.

¹⁰⁴ Stephanie Lewthwaite, “Race, Paternalism, and ‘California Pastoral’: Rural Rehabilitation and Mexican Labor in Greater Los Angeles,” *Agricultural History* 81, no. 1 (2007): 1–35, <https://doi.org/10.1215/00021482-81.1.1>, p.5.

Apart from rail transport, San Bernardino relies on highway placement to assert logistical superiority. Figure 4 illustrates the major transportation routes passing through San Bernardino as of 2023.

The I-215/I-15 freeway provides a north-south route leading through the San Bernardino mountain range towards the San Francisco region or San Diego, while the I-10 freeway promises mobility towards Phoenix, Nevada and more to the east. In the post-war period, San Bernardino faced an intensified adoption of cars - to the point that San Bernardino was known as Southern California's 'car-cruising capital' from the 1940s to 1970s.¹⁰⁵ During that period, San Bernardino was often perceived as 'a good place to live in order to get somewhere else'.¹⁰⁶ A 1950s advertising campaign suggested beautiful natural surroundings around San Bernardino convenient to visit by car.¹⁰⁷ Amongst others, these included beaches, mountains, and even deep sea fishing, all accessible by 'a few minutes drive', thanks to nearby freeways.¹⁰⁸ Thus, San Bernardino appears to provide high mobility for its residents and businesses.

It should be noted that apart from rail and highway infrastructure, San Bernardino City was home to Norton Air Force Base (NAFB) from 1942 to 1994.¹⁰⁹ While NAFB ran missile missions during the 1960s, it was mainly responsible as a logistics depot.¹¹⁰ By 1979, 8,200 civilians and military personnel were working there.¹¹¹ However, by 1988 the near-collapse of the Soviet Union led to the closure of NAFB by 1994, due to heavy air-traffic congestion with nearby Ontario International Airport, poor base infrastructure and lack of qualified civilians.¹¹² Although NAFB's closure led to the loss of 10,000 military jobs and 10,000 civilian air

¹⁰⁵ Michel Nolan, "Cruisin' Made San Bernardino 'the Car Town,'" San Bernardino Sun, June 25, 2015, <https://www.sbsun.com/2015/06/25/cruisin-made-san-bernardino-the-car-town/>.

¹⁰⁶ Preston Jones and Charles Palmer, "An Embattled City: Toward An Explanation Of The Decline Of San Bernardino, California," *Southern California Quarterly* 84, no. 1 (Spring 2002): 33–52, <https://doi.org/10.2307/41172110>, p. 37.

¹⁰⁷ Jones and Palmer, "An Embattled City: Toward An Explanation Of The Decline of San Bernardino, California," p. 37.

¹⁰⁸ Ibid, p. 38.

¹⁰⁹ Norton Air Force Base Museum, *Norton AFB Museum Fact Sheet: Norton Air Force Base* (San Bernardino, California: Norton Air Force Base Museum, 2023).

¹¹⁰ Norton Air Force Base Museum, *Norton AFB Museum Fact Sheet: Norton Air Force Base*.

¹¹¹ Jones and Palmer, "An Embattled City: Toward An Explanation Of The Decline of San Bernardino, California," p. 45.

¹¹² Norton Air Force Base Museum, *Norton AFB Museum Fact Sheet: Norton Air Force Base*.

base jobs, the Inland Valley Development Agency and San Bernardino Airport Authority were formed in 1990 to redevelop the base into San Bernardino International Airport (SBD), a civilian airport dedicated to logistics.¹¹³ Therefore, this diverse variety of transportation networks attracted Amazon to operate in the Inland Empire.

Physical mobility is not the only factor that attracted Amazon to settle in San Bernardino. Cheap labour has also been essential to the Inland Empire for well over a century. In Professor Stephanie Lewthwaite's essay, 'Race, Paternalism and "California Pastoral"', the Californian citrus industry was complicit in recruiting marginalised groups for intensive labour jobs, e.g. Chinese, Japanese, Filipino and Mexican workers but established a preference for Mexican workers by the 1920s.¹¹⁴ By 1942, California had established a temporary contract labour system known as the bracero programme in search of a system that could foster a stable, but mobile workforce that fluctuated seasonally.¹¹⁵ Labour workers thus lacked rights, an impermanent presence, and a low-paid, intensive labour environment.¹¹⁶

However, according to CSUSB Professor of Economics Eric Nilsson, this labour pattern was modified following the Second World War.¹¹⁷ Apart from NAFB's emergence during the war, Kaiser Steel was established in Fontana in 1942 for the war effort, operating until 1983. The Kaiser plant and NAFB employed a significant number of people in the region, with the former and latter employing more than 2,500 and 8,200 people at their peaks respectively.¹¹⁸ Because they employed a significant amount of people, both of their closures in the 1980s and 1990s constituted a large economic downturn in San Bernardino.¹¹⁹

¹¹³ Andrew Edwards, "Norton Propelled Economy, Life in San Bernardino Valley," Los Angeles Daily News, August 28, 2017, <https://www.dailynews.com/2010/04/11/norton-propelled-economy-life-in-san-bernardino-valley/>.

¹¹⁴ Lewthwaite, "Race, Paternalism, and 'California Pastoral': Rural Rehabilitation and Mexican Labor in Greater Los Angeles," p.5.

¹¹⁵ Ibid, p.3.

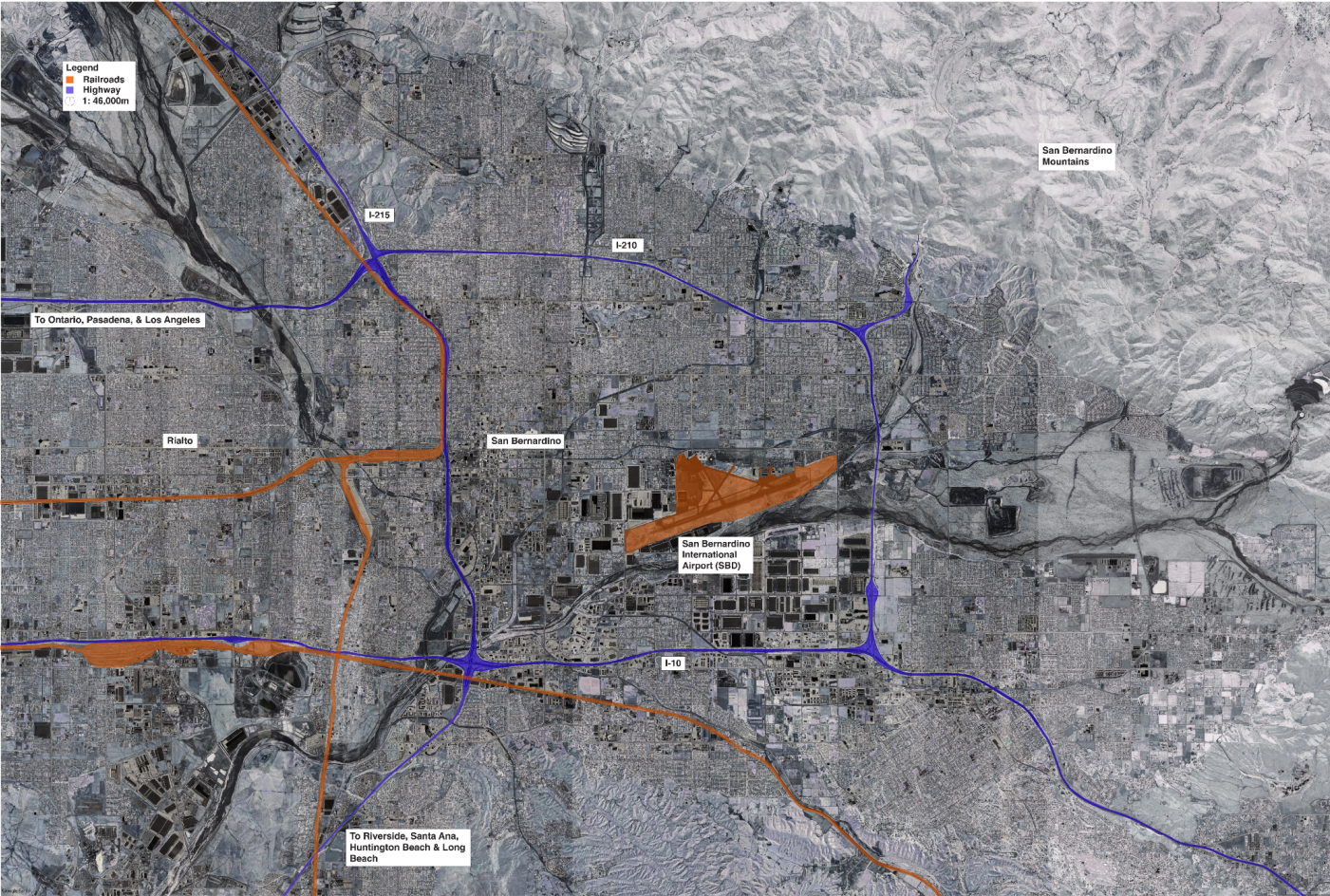
¹¹⁶ Ibid, p.3, p.5.

¹¹⁷ Augustine Wong, Interview with Professor Eric Nilsson, personal, June 24, 2023.

¹¹⁸ "Kaiser Steel Plant Site, California," The Center for Land Use Interpretation, accessed August 15, 2023, <https://clui.org/ludb/site/kaiser-steel-plant-site>.; Jones Palmer, "An Embattled City: Toward An Explanation Of The Decline Of San Bernardino, California," p. 45.

¹¹⁹ Wong, Interview with Professor Eric Nilsson.

Figure 4. Major transportation routes and networks arranged around San Bernardino from aerial satellite imagery.



Source: Inverted satellite photo at 1:46,000m scale obtained from Google Earth Pro.

Despite significant job losses as the result of two prominent employers shutting down in the region, the 1980s represented a transition in Inland Empire economics instead. Warehousing began to expand in the region in 1980, attributed towards China's Reform and Opening Up era role in increasing the significance of the LA-Long Beach Port, as well as the growth of e-commerce.¹²⁰

Warehousing is highly valuable to present-day San Bernardino economics. Today the Inland Empire represents one of the world's largest geographic concentrations of logistics companies and activities, from warehouse storage, material handling, order processing, inventory management, and more.¹²¹ In 2015, just under 600 million tons of freight worth USD\$1.7 trillion passed through the Inland Empire on its way to the Long Beach megaport.¹²² While the entire region possesses more than one billion square feet of warehouse and distribution centre facilities, Amazon makes up a large share.¹²³ A growing warehouse industry contributed to an increase in warehouse sizes, doubling from 2007 to 2017 to 184,000 square feet on average.¹²⁴ By contrast, Amazon 'fulfilment centres' (FCs) have grown in the region in terms of size, and presence. To operate on large-scale economies, FCs range from 600,000 to 1.5million square feet.¹²⁵ By 2015, half of nearly 600 million tons of freight that crossed the Inland Empire were processed by Amazon FCs alone.¹²⁶ Table 2 shows the growth of Amazon facilities in the Inland Empire.

¹²⁰ Ibid.; Allison, "What Happens When Amazon Comes to Town? Environmental Impacts, Local Economies, and Resistance in Inland Southern California," p.176.

¹²¹ Allison, "What Happens When Amazon Comes to Town? Environmental Impacts, Local Economies, and Resistance in Inland Southern California," p.176.

¹²² Ibid.

¹²³ Ibid.

¹²⁴ Ibid, p.177.

¹²⁵ Ibid.

¹²⁶ Ibid.

Table 2. *Amazon facilities' growth in the Inland Empire.*

Facility Code	Location	Opened	Type	Size	FT Employees
ONT2	San Bernardino (SBD)	Oct. 2012	FC	1.5 million ft ²	1500+
ONT3	SBD	/	MOD	/	/
ONT5	SBD	Oct. 2013	Sortation Centre	/	Varies
ONT8	Moreno Valley	Aug. 2014	FC	1.2 million ft ²	1500+
ONT6	Moreno Valley (MV)	Aug. 2014	FC	800,000 ft ²	Varies
ONT9	MV	Oct. 2014	IXD	800,000 ft ²	1000+
SNA4	Rialto	Nov. 2015	FC	90,000 ft ²	1000+
SNA7	SBD	Mar. 2016	FC	1 million ft ²	1500+
/	Riverside	Apr. 2016	Delivery station	36,000 ft ²	500
SNA6	Eastvale	Oct. 2016	FC	1 million ft ²	1500+
/	Chino	Mar. 2017	Delivery station	/	500

LGB4	Redlands	June 2017	FC	800,000 ft ²	1000+
LGB8	Rialto	Oct. 2017	IXD	600,000 ft ²	Varies
LGB6	Riverside	Mar. 2018	FC	1 million ft ²	600-900
LGB3	Eastvale	Mar. 2018	FC	1 million ft ²	1000+
LAX9	Fontana	June 2019	FC	6,000 ft ²	1000+
LGB7	Rialto	June 2019	FC	850,000 ft ²	
/	Beaumont	TBA	FC	640,000 ft ²	1000+
PCA3	Fontana	/	/	/	/

Source: Adapted from The Cost of Free Shipping: Amazon in the Global Economy.¹²⁷

Notes: FC - fulfilment centre, MOD - media on demand centre, IXD - inbound cross-dock centres.

As of 2021 Amazon contributed significantly to city income shown in table 3, and was listed as the second largest property taxpayer in the city, with Stater Bros. Markets being the first.¹²⁸

¹²⁷ Allison, “What Happens When Amazon Comes to Town? Environmental Impacts, Local Economies, and Resistance in Inland Southern California,” p.177-178.

¹²⁸ rep., *Annual Comprehensive Financial Report For the Fiscal Year Ended June 30, 2022* (City of San Bernardino, June 30, 2021),

<https://www.sbcity.org/common/pages/DownloadFileByUrl.aspx?key=rpVX3ZA2ULRFUnJPDRODn Cv9F3ug4YlwMncZ8rtYZ9x4CU%2fdk2zmRDkIRhvvYeBtqjccs4XHtoFSWEy65qTAvT7qxiJ8DyGqsCOMBHCEWR6b0AdvqiU4u0QLgKT9qETVICmVuEdeIWePo87kp46HM7pJ4q2Atf9fvy56uTOXKspxDtwUtQeLFy%2bK6cq4KCVkuG4vQ%3d%3d>.

Table 3. *Top 5 Principal Property Taxpayers in the City of San Bernardino in the Year 2022.*

Rank	Taxpayer	Taxable Assessed Value (USD\$)
1	Stater Bros Markets	387,453,424
2	Amazon Com Services Inc	256,691,489
3	BSREP III Central LLC	197,020,200
4	Eastgate Building 1 LLC	132,082,000
5	HW Southgate Building LLC	119,758,408

*Source: Adapted from the City of San Bernardino's Annual Comprehensive Financial Report, Fiscal Year Ended June 30, 2022.*¹²⁹

To examine Amazon's corporate responsibility to the area demands an observation of the community around Amazon facilities within San Bernardino. Since San Bernardino is understudied in terms of spatial planning, a four-day visit to California was made which found that Amazon surprisingly showed little to no interest in establishing relationships with the city from a perspective of urban planning. Nonetheless, it enjoys a dominant relationship over the city through more discrete, yet punishing social strategies.

4.2 San Bernardino: Carmageddon

Upon visiting, San Bernardino clearly lacked all characteristics of a company town that Pullman, Chicago possessed. No evidence could be found of Amazon building infrastructure inessential to its businesses, such as employee housing or shopping outlets. Instead, San Bernardino's urbanism appeared to follow a pattern of car-dominated infrastructure commonly found across the US. While examining neighbourhoods around

¹²⁹ rep., *Annual Comprehensive Financial Report For the Fiscal Year Ended June 30, 2022*, p.173.

San Bernardino airport, a walk along South Waterman Avenue, from 3rd Street to East Central Avenue found San Bernardino streets built more for cars, rather than pedestrians. This is shown in figure 5. Cars travelling in either direction are given three lanes, plus an additional left turn lane, while pedestrian crossings are sparsely spaced out. Using the ‘measure distance’ tool from Google Maps, the typical length of a street block experienced in San Bernardino were as followed in table 4.

Figure 5. *Photostitched panoramas captured along E Central Ave & S Waterman Ave in San Bernardino.*



Figure 5a. Stitched Panoramic Photo made near S Waterman Ave & E Mill St, San Bernardino, CA, USA



Figure 5b. Stitched Panoramic Photo made near E Central Ave & S Clevenger Drive, San Bernardino.



Figure 5c. Stitched Panoramic Photo made near E Central Ave & Lena Rd, San Bernardino.

Table 4. *Lengths of city blocks measured via Google Maps of San Bernardino, Pullman Town, and Toronto using 1 kilometre as a baseline.*

City	Measured Street Section	Number of street intersections along one kilometre length	Average block length (nearest m)
San Bernardino	E Rialto Ave to E Mill St, along South Waterman Ave	1	1,000m
Pullman Town	E 103rd St to E 108th St, along South Cottage Grove Ave	8	125m
Toronto, Canada	Bloor St E to Carlton St, along Yonge St	10	100m

Source: Google Maps

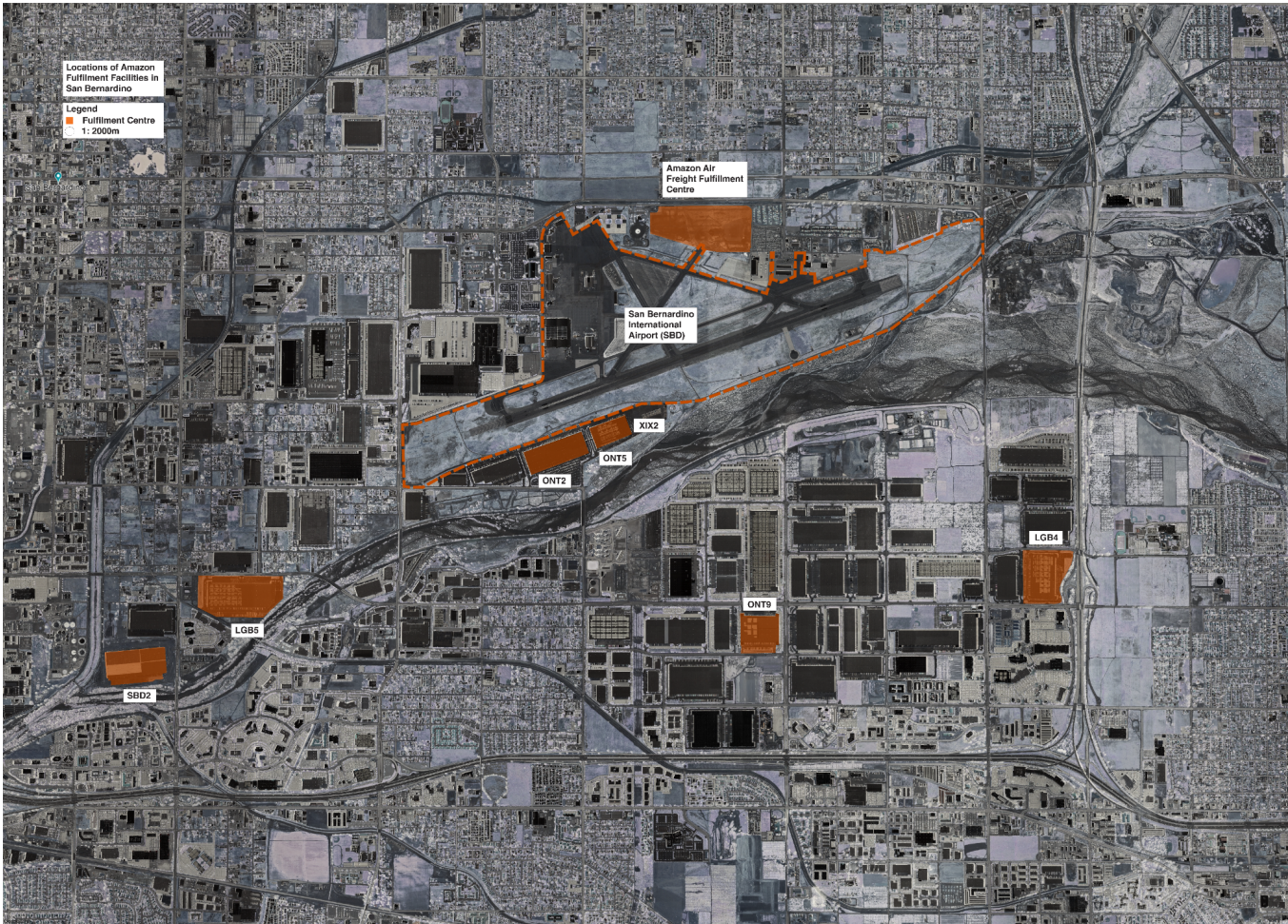
In comparison to a downtown city block in Toronto or a street block in Pullman, San Bernardino has created city blocks on a magnified scale. This reflects the land-intensive nature of car-oriented urbanism, which requires parking lots and private lanes for vehicle accommodation shown in figure 5. As a result, most of San Bernardino is unwalkable and has resulted in a typology alternating between strip malls, drive-throughs and gas stations sparsely spread out and intermixed with suburban residential blocks.

While it is difficult to identify a distinct downtown core in San Bernardino as compared to the ‘cruising’ style of sprawl identified in figure 8, Amazon’s presence around San Bernardino is primarily concentrated around San Bernardino International Airport for efficiency. Much media criticism comes from its

widespread presence in the Inland Empire, which includes towns such as Fontana, Rialto, Moreno Valley and Eastvale, but San Bernardino was found to have 9 large warehouse facilities alone in figure 6.

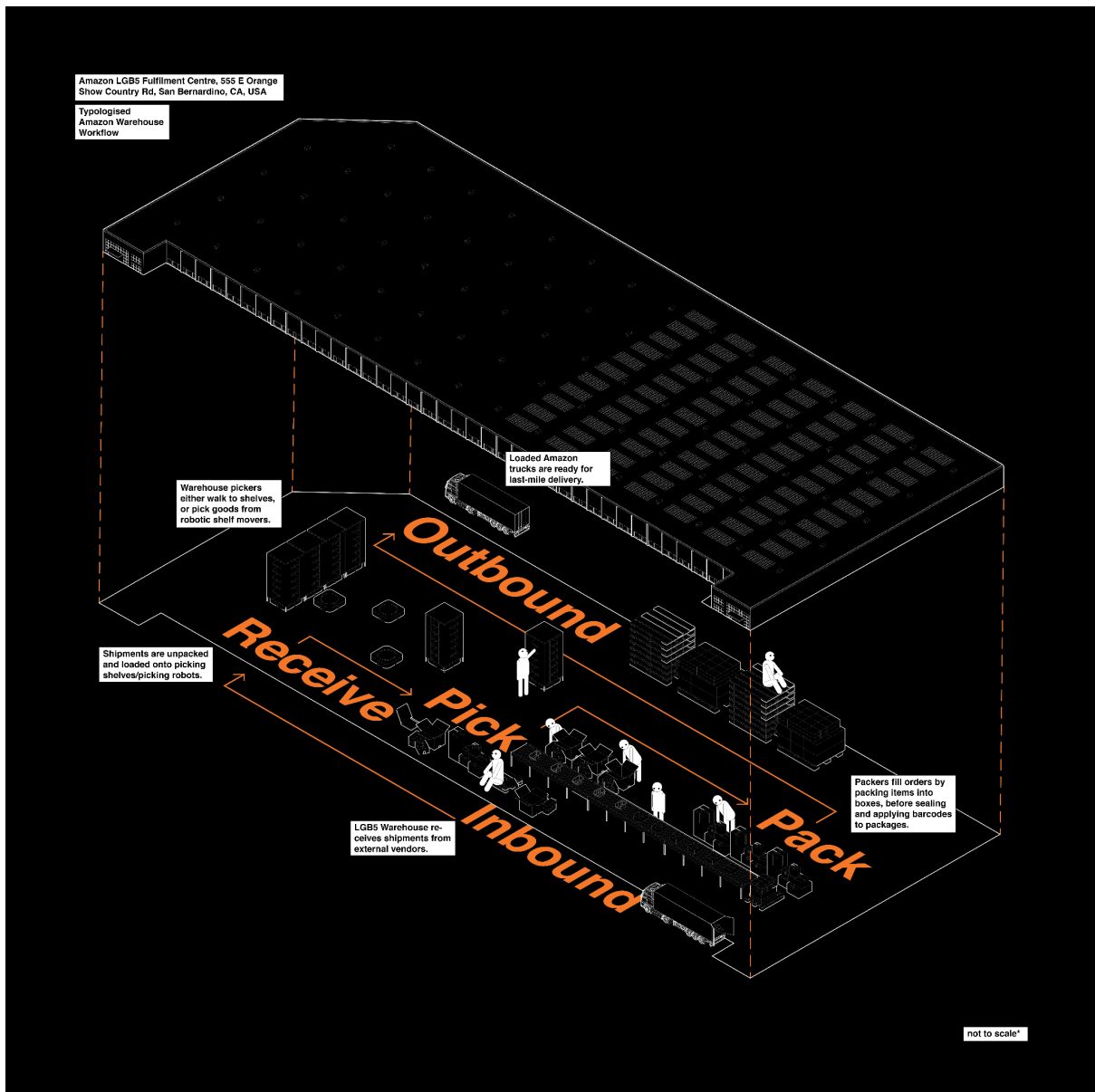
Figure 6 shows the location of Amazon facilities in the immediate vicinity of San Bernardino Airport, while figure 7 shows a generalised typology of Amazon warehouses and workflow. All in all, Amazon is highly interested in using the transport infrastructure that San Bernardino has to offer but is mostly uninvolved in generating spatial change.

Figure 6. Amazon facilities located directly within the vicinity of San Bernardino International Airport, 1:2000m scale.



Source: Google Earth Pro.

Figure 7. Generalised workflow diagram within an Amazon warehouse at various scales.



Sources: Amazon online guided tour, Google map 3D imagery of LGB5 fulfilment centre.

Note: This drawing is made of various scales for legibility. At Amazon's scale of production, details are barely visible in real life from a small scale. The exterior representation of LGB5 was constructed at 1:800 scale, whereas interior components were constructed at 1:50, 1:5 and 1:15 scales.

4.3 Changing Trends, Amazon's Business Model

This report posits that Amazon has not built up influence in the area using traditional methods because of two reasons. The reliance of automobiles amongst workers and within the State of California in general reduced a need for workers to live near production facilities that was commonly seen in company towns including Pullman, as well as previous legal precedents that have gradually eliminated the presence of the company town from common practice. The second reason is owing to Amazon's business model, which prefers a large, expendable workforce rather than a small workforce with specialist skills.

As previously mentioned, Pullman thrived by existing on Chicago's outskirts from a lack of government intervention, surplus of cheap land, and won numerous accolades for its urban planning and design.¹³⁰ The enclave was designed to be walkable, so that workers could live close to production facilities within the facility. During the 1880s Pullman was considered to be remotely located from downtown amenities, which justified the creation of a walkable community. Despite this, the 1894 Pullman Strike showed that George Pullman acted in his own interests, and neglected his workers in a time of strife. In 1898, the Supreme Court of Illinois ruled that the Pullman Company was operating Pullman Town illegally.¹³¹ While the Pullman Company was within its right to acquire and hold land to conduct necessary business, the Supreme Court determined that Pullman's housing scheme and other facilities were not proper businesses, writing the following excerpts:

*'The building in question [Pullman Town] is much larger, many more rooms and offices, than the business or wants of the corporation demand; that only a small portion of it is occupied by the company's employés; that it was erected as an investment by the company, and therefore that the company owns and maintains the building without authority of law [...]*¹³²

¹³⁰ Hudson, "The 'Un-American' Experiment: Jane Addams's Lessons from Pullman," p.907.

¹³¹ People ex rel. Moloney v. Pullman's Palace-Car Co. (Supreme Court of Illinois October 28, 1898).

¹³² People ex rel. Moloney v. Pullman's Palace-Car Co.

In summary it was concluded that Pullman lacked the power to hold real estate to provide housing and facilities for its employees, because the company was created to manufacture and service railroad carriages only.¹³³ While this ruling is currently more than a century old, it arguably signalled to other companies responsible for managing company towns that company towns were not tolerated under law unless by necessary means. Coupled with the Pullman Strike which showed more than 20,000 workers strike as social opposition to such a corporate management style, it can be imagined the Supreme Court of Illinois' ruling not only dismantled Pullman Town, but began a similar process across the country.¹³⁴ Nonetheless, 'outlawing' company towns coincided with an increase in worker mobility. An intense car culture environment in San Bernardino proved that the need for workers to live close to workplaces has been eliminated by providing options to commute via automobile or railway.

In addition, it was observed that Amazon has created numerous facilities termed as 'fulfilment centres' in figure 6 across San Bernardino. While distributed piecemeal across the city, these centres are purpose-built facilities that house entire shipping operations under one roof. Figure 7's illustration of Amazon's workflow - which consists of 'pick, pack, SLAM (scan, label, apply, manifest) and ship', is immensely more simple compared to Pullman's manufacturing process. Whereas Pullman sleeper cars emphasised luxury manufacturing techniques such as hand-painted details, etc, Amazon workers require very low skill sets in a Taylorised process that places emphasis on speed rather than quality, at the cost of its employees' well-being. A cursory glance at Amazon's hiring website (Amazon Jobs) offers hourly opportunities, such as 'fulfilment centre warehouse associate', 'delivery station warehouse associate', 'sortation centre warehouse associate', and 'XL warehouse associate'. Descriptive phrases include '*Amazon has hourly jobs for everyone*', suggesting low barriers in the way of joining the Amazon workforce.¹³⁵ Although these jobs vary in terms of title, their

¹³³ Ibid.

¹³⁴ Hudson, "The 'Un-American' Experiment: Jane Addams's Lessons from Pullman," p.905.

¹³⁵ Amazon, "Amazon Warehouse, Shopper, and Driver Jobs - We Are Hiring!," Amazon warehouse, shopper, and driver jobs - We are hiring!, accessed August 14, 2023, <https://hiring.amazon.ca/job-opportunities/warehouse-jobs?cmpid=ATLTBX1796H10#/>.

operation remains more or less the same, relying on workers for mostly physical labour in easily-trained positions. A job description illustrates brief expectations of the role: receiving and putting away inventory, loading boxes onto trucks for last-mile delivery, scanning barcodes, following on-screen prompts, etc.¹³⁶ On the Amazon Jobs website, job perks are described in simple, positive phrases, such as ‘Stay Busy’ as rationale to love the job, ‘Work-Life Balance’, and ‘Our Culture’.¹³⁷ However, reports from San Bernardino workers paint an overwhelmingly dissociative image owing to poor working conditions created from a ruthless business model.

For one of the world’s largest e-commerce giants, Amazon has had a slow return on profit. While Amazon launched its IPO in 1997, it was only able to record a profitable year by 2003.¹³⁸ It is true that Amazon’s profit has risen considerably since then. For instance, revenue in Q4 2003 reached USD\$1.9 billion.¹³⁹ By 2022, it reported a total revenue of USD\$14.3 billion.¹⁴⁰ Nonetheless, its e-commerce and logistics business appears fragile compared to its cloud computing division, Amazon Web Services (AWS), which was labelled by the New York Times as a ‘big profit generator’.¹⁴¹ In Q4 2022, AWS alone raked a profit of USD\$21.4 billion despite being the division’s slowest growth on record.¹⁴² Meanwhile, Amazon’s e-commerce division has historically achieved success by focusing on a high-quality consumer experience against its competitors. In 2003, Amazon’s then-CEO Jeff Bezos attributed the company’s earnings to low prices, free shipping options and a wide variety of products for consumers to choose from.¹⁴³ Amazon has historically practiced a philosophy of customer satisfaction that has resulted in an extremely efficient, streamlined business model.

In a call between Bezos’ successor CEO Andy Jassy, and investors, Jassy continued to emphasize a strong

¹³⁶ Amazon, “Amazon Warehouse, Shopper, and Driver Jobs - We Are Hiring!”

¹³⁷ Ibid.

¹³⁸ Amazon, “Amazon.Com, Inc. FAQs,” Amazon, accessed August 16, 2023, <https://ir.aboutamazon.com/faqs/default.aspx>; Juan Carlos Perez, “Amazon Records First Profitable Year in Its History,” Computerworld, January 28, 2004, <https://www.computerworld.com/article/2575106/amazon-records-first-profitable-year-in-its-history.html>.

¹³⁹ Perez, “Amazon Records First Profitable Year in Its History.”

¹⁴⁰ Karen Weise, “Amazon Reports Almost No Profit and Slowing Growth,” The New York Times, February 2, 2023, <https://www.nytimes.com/2023/02/02/business/amazon-earnings.html>.

¹⁴¹ Weise, “Amazon Reports Almost No Profit and Slowing Growth.”

¹⁴² Ibid.

¹⁴³ Perez, “Amazon Records First Profitable Year in Its History.”

consumer experience. “Being maniacally focused on the customer experience is always going to be a top priority for us [...] We are working really hard to streamline our costs...”¹⁴⁴ Cost cutting measures, for instance, involved rolling back expansion plans like overbuilt warehouse infrastructure, laying off 18,000 corporate workers and transferring costs back onto consumers in what appears to be a growth contraction following the pandemic.¹⁴⁵ In these conditions, how could Amazon possibly create a company town of their own for warehouse workers? Located in a city with strong pre-existing residential infrastructure indicates that despite suboptimal living experiences within San Bernardino, Amazon is not responsible for the city’s predicament, but its own issues with fulfillment centres. Investment on warehouse efficiency is not focused on warehouse workers. By contrast, the e-commerce giant has opted to augment logistics with technology to conduct shipping on an economy of scale and speed. However, this has caused workers to complain about health and digital surveillance issues.

4.4 Amazon as a Meat Grinder

In October of 2022, a group of air freight workers working at the KSBD FC, known as the Inland Empire Amazon Workers United (IE Amazon Workers United/IEAWU) went on strike for a raise of \$5 per hour and increased safety measures.¹⁴⁶ Their activity has attracted various media outlets from the San Bernardino Sun, to the New York Times and LA Times. On Instagram, the IEAWU concerned workers falling ill due to prolonged exposure to heat on the SBD airport runway.¹⁴⁷ On top of that, literature has extensively documented an intensive work environment across Amazon facilities. In the book *The Cost of Free Shipping: Amazon in the Global Economy*, an argument of Amazon using technology as a double-edged sword

¹⁴⁴ Weise, “Amazon Reports Almost No Profit and Slowing Growth.”

¹⁴⁵ Ibid.

¹⁴⁶ Suhauna Hussain, “Amazon Workers in San Bernardino Allege Anti-Union Actions and Retaliation,” Los Angeles Times, October 15, 2022, <https://www.latimes.com/business/story/2022-10-15/amazon-workers-at-san-bernardino-air-freight-facility-protest-alleged-retaliation>.

¹⁴⁷ IE Amazon Workers United, “After Seeing Too Many of Our Coworkers Fall Ill in the Heat, We Took Action and Filed a Complaint with CalOSHA.,” Instagram, August 14, 2023, https://www.instagram.com/p/Cv8HUg2ybG0/?img_index=1.

emerges. When an order is placed online, Amazon uses an algorithmic system to assign tasks to workers, another system to monitor workers, and others for more automated systems - for instance, a fleet of Kiva autonomous robots that move goods around Amazon's latest fulfillment centres.¹⁴⁸ Workers primarily rely on hand-held scanners for various tasks, from scanning barcodes, worker IDs, or tracking goods.¹⁴⁹ These technologies are nowhere exclusive to Amazon, but its use of scanners to collect extraneous data regarding the worker extends the company's soft power over its employees. Scanners are capable of tracking worker output to allow management to monitor and coax workers to operate at a profitable rate.¹⁵⁰ Productivity is measured through workers' work rates, error rates and times spent off tasks, but work-rate standards may fluctuate over time, such as peaking during the holiday shopping season.¹⁵¹ Fulfilling such standards, known as 'making rate' is difficult, as workers are under pressure to minimise errors and time spent off task which impacts their productivity rate negatively.¹⁵² One worker, Fernando reported that workers received 30 minutes of time spent off task per week. Going over that 30-minute time limit would result in a verbal warning. Three verbal warnings would result in a write-up, and three write-ups would result in termination. Nine mistakes is all it takes for a worker to lose their job.¹⁵³

These first-hand accounts imply that Amazon's worker monitoring system acts as a deterrent to keep easily hired floor workers from slacking off — with job security as an incentive. Workers sacrifice their personal health to make rate regularly. An exposé by the New York Times revealed that workers could be scanning up to 300 items per hour, or five items per minute, which translates to 12 seconds to scan one item. In order to make such a rate, some skipped bathroom breaks.¹⁵⁴ Even if workers received a 15-minute break every

¹⁴⁸ Jake Alimahomed-Wilson et al., "Automation and the Surveillance-Driven Warehouse in Inland Southern California," essay, in *The Cost of Free Shipping: Amazon in the Global Economy* (London, UK: Pluto Press, 2020), 85–101, p.90-91.

¹⁴⁹ Alimahomed-Wilson et al., "Automation and the Surveillance-Driven Warehouse in Inland Southern California," p.91.

¹⁵⁰ Ibid.

¹⁵¹ Ibid, p.92.

¹⁵² Ibid.

¹⁵³ Ibid.

¹⁵⁴ Erika Hayasaki, "Amazon's Great Labor Awakening," *The New York Times*, February 18, 2021, <https://www.nytimes.com/2021/02/18/magazine/amazon-workers-employees-covid-19.html>.

three-and-a-half hours spent working, the actual time spent resting in break rooms or restrooms was five minutes.¹⁵⁵ This time loss was attributed to the time taken to walk back and forth from break rooms across Amazon's massive facilities.¹⁵⁶

To make rate, others suffered injuries in the process. Workers who were hired to 'pick', or retrieve goods for 'packers', were physically strained from having to repetitively bend, squat, lift and trek miles of warehouse floors daily.¹⁵⁷ Amazon's warehouses, already larger than the average warehouse, covers an area about the size of "four big box stores" combined.¹⁵⁸ Walking great distances daily caused employees exhaustion and pain, especially amongst pickers — to the point where a piece of employee advice to new hires was to take ibuprofen: before shifts, on breaks, and after work.¹⁵⁹ All these working conditions establish Amazon warehouses as a workplace that tests employees' abilities to endure long, physically demanding shifts while under pressure to keep up production goals. An Amazon warehouse is hence like a meat grinder, where Amazon hires employees until they face termination or quit, only to be replaced by other fresh hires.

During the pandemic, Amazon went on a hiring spree for warehouse workers and couriers. Between January and October of 2020, Amazon added 427,300 employees around the world. By December 2020, it employed 1.3 million people worldwide, representing the largest growth in employees for companies in history.¹⁶⁰ As seen in table 3, the median of company workers in the Inland Empire was more than 1000 people per facility. However, leaked internal documents in 2022 show that Amazon faced an incredulous turnover rate of 150% — double the industry standard rate, and costing the company USD\$8 billion annually.¹⁶¹ "Regretted

¹⁵⁵ Alimahomed-Wilson et al., "Automation and the Surveillance-Driven Warehouse in Inland Southern California," p.95.

¹⁵⁶ Ibid.

¹⁵⁷ Hayasaki, "Amazon's Great Labor Awakening."

¹⁵⁸ Alimahomed-Wilson et al., "Automation and the Surveillance-Driven Warehouse in Inland Southern California," p.94.

¹⁵⁹ Ibid.; Hayasaki, "Amazon's Great Labor Awakening."

¹⁶⁰ Alimahomed-Wilson et al., "Automation and the Surveillance-Driven Warehouse in Inland Southern California," p.94.

¹⁶¹ Edward Segal, "Amazon Responds to Release of Leaked Documents Showing 150% Annual Employee Turnover," Forbes, October 25, 2022,

<https://www.forbes.com/sites/edwardsegal/2022/10/24/amazon-responds-to-release-of-leaked-documents-showing-150-annual-employee-turnover/?sh=56c5e1011d0b>.

attrition”, or workers leaving the company by choice, was found to occur twice as often as “unregretted attrition”, the term for termination or layoffs, supporting the perspective of both a poor workplace culture and ruthless productivity management.¹⁶² Workers are aware of their precarious job position. Sheheryar Kaosji said the following to the New York Times:

“There’s always this pool of people who are one step behind you. So, if you speak up or if you organize, there’s a hundred temp [temporary] workers right outside the door who would be able to take your job.”¹⁶³

Temporary workers are often hired by Amazon to meet occasional periods of high consumer demands, such as Black Friday, and Christmas. Termed as ‘seasonal warehouse workers’ by Amazon, such workers are offered jobs with flexible pay schedules, overtime, and ‘anytime pay’, meaning workers are free to obtain their paycheques with little to no delay.¹⁶⁴ These workers can be as transient as a few hours, or up to a season’s worth of work. The film *Nomadland* (2020) directed by Chloe Zhao follows a woman named Fern, formerly a resident of Empire, Nevada, navigating the American badlands as a dramatised ethnography of post-2008 recession automobile nomads.¹⁶⁵ To earn work, Fern and other nomads find work at Amazon as ‘temps’. *Nomadland* itself tells a story of loss and discovery over the course of what appears to be one full year, with Fern working both winter seasons as an Amazon temp. Even though *Nomadland* received criticism for appearing impervious towards a harsh reality on the warehouse floor, the film finds itself fitting with reality in terms of Amazon work culture.¹⁶⁶ *The Cost of Free Shipping* accuses Amazon of creating an environment of Marxist alienation in a massive facility, combined with a lack of social interaction between

¹⁶² Avery Menegus, “Exclusive: Amazon’s Attrition Costs \$8 Billion Annually According to Leaked Documents. and It Gets Worse.” Engadget, October 17, 2022, <https://www.engadget.com/amazon-attrition-leadership-ctsmd-201800110.html>.

¹⁶³ Hayasaki, “Amazon’s Great Labor Awakening.”

¹⁶⁴ Amazon, “Seasonal Warehouse Job Opportunities,” Amazon, 2023, <https://hiring.amazon.com/search/seasonal-jobs#/>.

¹⁶⁵ *Nomadland*, directed by Chloe Zhao (Searchlight Pictures, 2020).

¹⁶⁶ Richard Lawson, “Nomadland Is Stirring up Controversy. Does the Academy Care?,” Vanity Fair, April 15, 2021, <https://www.vanityfair.com/hollywood/2021/04/nomadland-amazon-oscars-controversy>.

workers.¹⁶⁷ As much as *Nomadland* critics point out Fern's preference for "good money" made working at Amazon, *Nomadland* is a film of physical and social isolation, which translates excellently at Amazon's FCs.¹⁶⁸ In *Nomadland*, Fern makes superficial acquaintances at Amazon. Despite being surrounded by people at workstations, she barely interacts with her co-workers shown in figure 8.

Fern works alone, eats alone and barely converses meaningfully with other employees, going only as far to mouth a mere acknowledgement at the 13-minute mark in Figure 12. There appears to be an underlying assumption in *Nomadland* that one's interactions will always be fleeting, thanks to the liminal nature of independent, nomadic travelling. Regardless of how many seasons these temporary workers join Amazon for, this helps foster a culture of impermanence within Amazon, combined with a work culture that burns out regular employees and a turnover rate of 150% in the name of achieving short-term efficiency. This strategy appears so unsustainable, that in 2022 Vox News reported that Amazon could run out of hires by 2024 by depleting the available labour supply within the US network.¹⁶⁹

¹⁶⁷ Alimahomed-Wilson et al., "Automation and the Surveillance-Driven Warehouse in Inland Southern California," p.86.

¹⁶⁸ Lawson, "Nomadland Is Stirring up Controversy. Does the Academy Care?"

¹⁶⁹ Jason Del Rey, "Leaked Amazon Memo Warns the Company Is Running out of People to Hire," Vox, June 17, 2022, <https://www.vox.com/recode/23170900/leaked-amazon-memo-warehouses-hiring-shortage>.



Figure 8. *Still images from Nomadland of Fern's social isolation working at Amazon. Top image: Fern scans items as a 'picker' in silence while her friend, Linda May, does the same. (8:00) While in proximity, workers are 'quarantined' from one another. Bottom image: Fern acknowledges an Amazon acquaintance off-screen. (13:00)*

On top of that, Amazon has made no secret that it desires to increase its efficiency by removing expendable and replaceable employees altogether. In the essay, *Human Exclusion Zones* (2019) by Jesse LeCavalier, Assistant Professor of Architecture at the New Jersey Institute of Technology, Amazon's latest development in super-efficiency warehouses is a fleet of Kiva (now Amazon Robotics) robots known as robotic drive units

(RDUs) that move to deliver inventory to human pickers.¹⁷⁰ RDUs work efficiently by a ‘bidding system’ which calculates the time needed for every RDU in the system to deliver inventory shelving units (pods) to a picking station.¹⁷¹ Since the RDUs navigate by scanning a grid of barcodes pasted on the floor, with location determined solely by a local wireless network, RDUs only need to guide themselves by a small floor light to scan floor codes.¹⁷² The result is what LeCavalier terms a ‘human exclusion zone’: One that is dark, quiet, and devoid of humans for safety and efficiency reasons.¹⁷³ These robot pickers, seen in figure 12 working with Fern and Linda May, save human pickers time and energy compared to personally retrieving items from warehouse stacks. Although this is a net benefit for human pickers, Amazon executives dream of a future exclusively made up of RDUs — known as a ‘lights out facility’. Regardless of the estimate that ‘lights out facilities’ may be at least ten years away from fully replacing human workers, Amazon’s current practices all point towards a corporate failure to care for their employees’ well-being, even leaning on the border of indifference.¹⁷⁴

4.5 Effectiveness of Benefits at Amazon

If Amazon does not build infrastructure for its local and corporate community, while its own infrastructure neglects the needs of its employees, does it compensate by other means? Working at Amazon entails two aspects of compensation: pay, as well as social benefits. In contrast to other companies, Amazon works as a ‘salary-first’ company according to Amy Spurling, founder and CEO of HR software company Compt.¹⁷⁵ It prides itself on jobs with higher-than-minimum wages, offering pay starting at USD\$19/hour up to USD\$22 on select shifts, well over the US minimum wage of \$7.25/hour, and the Californian state

¹⁷⁰ Jesse LeCavalier, “Human Exclusion Zones: Logistics and New Machine Landscapes,” *Architectural Design* 89, no. 1 (2019): 48–55, <https://doi.org/10.1002/ad.2388>, p.51

¹⁷¹ LeCavalier, “Human Exclusion Zones: Logistics and New Machine Landscapes,” p.52.

¹⁷² *Ibid*, p.54.

¹⁷³ *Ibid*, p.

¹⁷⁴ Alimahomed-Wilson et al., “Automation and the Surveillance-Driven Warehouse in Inland Southern California,” p.97.

¹⁷⁵ Segal, “Amazon Responds to Release of Leaked Documents Showing 150% Annual Employee Turnover.”

minimum of \$15.50/hour.¹⁷⁶ However, wages appear to be the most of Amazon's benefits, as Spurling noted on turnover rates: "They don't believe in supplementing total compensation with employee perks. That's clearly, not working. Law firms do the same thing, and it's not working."¹⁷⁷

In response to the leaked internal documents on corporate turnover rates, an Amazon spokesperson reiterated ongoing benefits programmes for employees. For instance, Amazon employees are eligible for comprehensive health care, dental and vision benefits, whether hourly or salaried while working at Amazon. On top of that, the spokesperson emphasised the fact that the company was expanding their prepaid tuition programme for higher education, job training, and 'anytime pay'.¹⁷⁸ Indeed, Amazon offers additional benefits for employees, from 40+ hours of overtime, an RRSP savings plan, financial counselling and estate planning, to healthcare, 20 weeks of fully paid parental leave and 24/7 access to Amazon's Employee Assistance Program for mental health.¹⁷⁹ Amazon also prides itself on its work culture in regards to several key areas including but not limited to environmental sustainability, and leadership support. For instance, Amazon stresses its free skill training programmes, dedicating over USD\$700 million of investment towards this effort.¹⁸⁰ On top of that, Amazon's arrival at San Bernardino lowered the unemployment rate from 15% in 2012 to 5% in 2018.¹⁸¹ These are indicators leaning in favour of Amazon as a net positive to its resident communities.

Surprisingly, statistics indicate the opposite when it comes to pay, health benefits, and education programmes by Amazon at San Bernardino. In 2011, the share of people living below the poverty line in San Bernardino was 23.4%, one year before Amazon opened its first FC in the region. By 2016, it had risen to

¹⁷⁶ "Amazon Jobs Hiring Now - Hourly & Shift Jobs @ Amazon," Amazon Jobs, accessed August 17, 2023, <https://hiring.amazon.com/>.

¹⁷⁷ Segal, "Amazon Responds to Release of Leaked Documents Showing 150% Annual Employee Turnover."

¹⁷⁸ Ibid.

¹⁷⁹ "Benefits, Perks @ Amazon Warehouse Jobs," Amazon Jobs, accessed August 17, 2023, <https://hiring.amazon.ca/why-amazon/benefits#/>.

¹⁸⁰ "Culture at Amazon Warehouses," Amazon Jobs, accessed August 17, 2023, <https://hiring.amazon.com/why-amazon/culture#/>.

¹⁸¹ Alana Semuels, "What Amazon Does to Poor Cities," The Atlantic, April 20, 2021, <https://www.theatlantic.com/business/archive/2018/02/amazon-warehouses-poor-cities/552020/>.

28.1%, suggesting that Amazon exacerbates economic problems instead.¹⁸² Meanwhile, jobs with similar work styles offered by the grocery chain Stater Brothers enjoyed much better benefits by contrast. Stater Bros. workers are unionised, with full medical coverage, pensions, and retiree medical benefits, and with wages starting at USD\$26 an hour.¹⁸³ Although Amazon offers paying jobs above the minimum wage, it appears to fall below the industry standard, thus aggravating economic inequality in the region. In fact, The Economist found that workers earn 10 percent less in areas where Amazon operates, proving that Amazon negatively impacts regional economics despite creating more jobs.¹⁸⁴

Benefits are also disproven for workers, few of which are able to maintain their jobs long enough to take advantage of said benefits.¹⁸⁵ While Amazon claimed that all workers are entitled to benefits no matter working in hourly or salaried positions, reports from *The Atlantic* and the *New York Times* contradict this.¹⁸⁶ Benefits are only available for workers who have worked at the company a year or more, according to *The Atlantic*, which highlights the usefulness of temporary workers to Amazon by saving resources on worker benefits.¹⁸⁷

Nonetheless, city officials assert that Amazon has been a ‘very good neighbour and private partner’ for San Bernardino by pointing to corporate contributions to local schools and charities, worth ‘hundreds of thousands’ of dollars.¹⁸⁸ A particular example might be the “Amazon Logistics and Business Management Pathway”, a series of courses created in 2019 by Amazon at Cajon High School to help students get a head start in a logistics career.¹⁸⁹ It contributed USD\$50,000 worth of funding for materials as well as the redesign

¹⁸² Semuels, “What Amazon Does to Poor Cities.”

¹⁸³ Ibid.

¹⁸⁴ Ibid.

¹⁸⁵ Ibid.

¹⁸⁶ Segal, “Amazon Responds to Release of Leaked Documents Showing 150% Annual Employee Turnover.”

¹⁸⁷ Semuels, “What Amazon Does to Poor Cities.”

¹⁸⁸ Ibid.

¹⁸⁹ “Cajon High School Amazon Pathways Logistics Lab,” San Bernardino City Unified School District Facilities Planning and Development, September 13, 2021, <https://sbcusdfacilities.com/projects/cajon-hs-pathways-lab/>; Aaron Gordon and Lauren Kaori Gurley, “Amazon Paid for a High School Course. Here’s What It Teaches.,” VICE, January 26, 2022, <https://www.vice.com/en/article/bvndja/amazon-paid-for-a-high-school-course-heres-what-they-teach>.

of a classroom into the ‘Cajon High School Amazon Pathways Logistics Lab’.¹⁹⁰ The San Bernardino Unified School District advertises it as a ‘first-of-its-kind’ course that teaches students about information and decision technology, business leadership and management systems using real life logistics problems experienced by Amazon.¹⁹¹ Because the Pathway course is partnered with CSUSB and Chaffey Community College, students are able to earn certifications, internships at Amazon, or pursue further education at post-secondary or post-diploma institutions.¹⁹² Although a spokesperson for the San Bernardino Unified School District said that Amazon was only acting as an ‘industry expert’, there is strong evidence to show that the Pathway course acts as an Amazon training course for entry-level management for its warehouse jobs.

In figure 9, Amazon principles are plastered on a classroom wall in patterns of bright yellow, resembling boxes in various states of unfold presented in elevation oblique view. Lessons plans range from managing labour unions, to discovering ways to motivate employees.¹⁹³ For instance, one team activity asks students to think of ways to motivate employees outside of high salaries and large bonuses, highly reflective of Amazon as a ‘salary-first’ company with deficient benefits and suggesting that Amazon is using real-life problems to familiarise hires from the Pathway course for managing warehouse floor workers in real positions.¹⁹⁴

Amazon’s involvement does not end at supplying real-life business scenarios, but uses the opportunity to expose students to a corporate-positive perspective. In the Unit, ‘*Managing Human Resources and Labour Relations*’, students are taught about negotiations between management and labour unions. One question in the lesson plan includes: ‘How are grievances between management and labour resolved, and what tactics are used to force a contract settlement?’¹⁹⁵ While this is open-ended, Amazon’s sponsorship for this course suggests the idea that students are being taught union-busting tactics. In another course, ‘Global Logistics

¹⁹⁰ Gordon and Gurley, “Amazon Paid for a High School Course. Here’s What It Teaches.”

¹⁹¹ “Cajon High School Amazon Pathways Logistics Lab,” San Bernardino City Unified School District Facilities Planning and Development.

¹⁹² Ibid.

¹⁹³ Gordon and Gurley, “Amazon Paid for a High School Course. Here’s What It Teaches.”

¹⁹⁴ Ibid.

¹⁹⁵ Ibid.

and Concepts’, students are briefly lectured on Amazon’s history and evolution, to be ‘motivated to participate in this exciting and growing field of e-commerce and logistics.’¹⁹⁶ “To develop an Amazon curriculum is mostly to buy goodwill from local actors (schools and governments),” Professor Eric Nilsson wrote by email in an interview.¹⁹⁷ “This can often be done quite cheaply.”¹⁹⁸ All these suggest that rather than practicing meaningful contributions to the area as a ‘good neighbour’, Amazon is inclined to go as far to use education as a means of recruitment and internalise company principles for its own benefit.



Figure 9. *Amazon Logistics and Business Management Pathway classroom at Cajon High, with Amazon Leadership Principles—CUSTOMER OBSESSION, BIAS FOR ACTION, and DELIVER RESULTS printed on the walls.*¹⁹⁹

¹⁹⁶ Ibid.

¹⁹⁷ Wong, Interview with Professor Eric Nilsson.

¹⁹⁸ Ibid.

¹⁹⁹ *Amazon Logistics and Business Management Pathway Classroom at Cajon High, with Amazon-Oriented Principles on the Wall.*, Cajon High School Amazon Pathways Logistics Lab (San Bernardino City Unified School District Facilities Planning and Development), accessed August 18, 2023, <https://sbcusdfacilities.com/projects/cajon-hs-pathways-lab/>.

Amazon has barely asserted itself in San Bernardino in terms of a spatial presence. In 2022, it covered no more than 1.45% of San Bernardino City's total area.²⁰⁰ Nonetheless, it manages to assert itself socially, in terms of hiring, workplace practices, as well as funding education to enable an agenda friendly to the corporation within San Bernardino. Even with an infrastructure strategy that comes nowhere as ambitious as Pullman, Amazon's presence manifests spatially in other, negative ways. In 2021, the Guardian newspaper released findings that showed warehouse booms were correlated with severe decreases in air quality in the area.²⁰¹ Areas that ranked in the highest percentile for toxic emissions in California were also areas where warehouses were concentrated. In particular, San Bernardino was ranked as having the worst ozone pollution in the US as well, triggering Juliann Allison to accuse Amazon as complicit in sustaining spatial injustice in the Inland Empire.²⁰² In spite of this, Amazon recently celebrated the rollout of custom electric delivery vans in 2022 with considerable press attention that closely follows Reiff and Hirsch's writings on disingenuous corporate image-making.²⁰³ A considerable difference from Pullman is that Amazon believes itself emancipated from its sites of operation, thus neglecting or creating disingenuous efforts to improve their surrounding areas. In fact, Amazon executives are ostensibly so obsessed with satisfying customers that management may be unaware of the power they possess in San Bernardino and the greater Inland Empire.

4.6 "It's either Amazon or Nothing," He Told Me²⁰⁴

While Amazon's Pathway course requires students to participate in a work-based internship in logistics, students do not necessarily need to work at Amazon, but may work at other logistics companies in the San

²⁰⁰ *Annual Comprehensive Financial Report For the Fiscal Year Ended June 30, 2022* (City of San Bernardino, June 30, 2021).

²⁰¹ Sam Levin, "Amazon's Warehouse Boom Linked to Health Hazards in America's Most Polluted Region," *The Guardian*, April 15, 2021, <https://www.theguardian.com/technology/2021/apr/15/amazon-warehouse-boom-inland-empire-pollution>.

²⁰² Levin, "Amazon's Warehouse Boom Linked to Health Hazards in America's Most Polluted Region.," Allison, "What Happens When Amazon Comes to Town? Environmental Impacts, Local Economies, and Resistance in Inland Southern California," p.176.

²⁰³ Amazon, "Amazon's Electric Delivery Vehicles from Rivian Roll out across the U.S.," *About Amazon*, July 21, 2022, <https://www.aboutamazon.com/news/transportation/amazons-electric-delivery-vehicles-from-rivian-roll-out-across-the-u-s>.

²⁰⁴ Semuels, "What Amazon Does to Poor Cities."

Bernardino region.²⁰⁵ Even so, Amazon appears to some as the only choice for Inland Empire communities, which are still recovering from the 2008 recession. One Amazon worker, Gabriel Alvarado, reported that there were few other local options apart from Amazon or companies contracted with Amazon.²⁰⁶ Although Alvarado was able to obtain a commercial driving license through Amazon's tuition reimbursement scheme, the best opportunity was working for a third-party Amazon contractor.²⁰⁷ Poor social mobility working at Amazon is amplified by the lack of social mobility in San Bernardino in general. Table 5 shows the main sales tax remitters in San Bernardino City in 2022.

²⁰⁵ Gordon and Gurley, "Amazon Paid for a High School Course. Here's What It Teaches."

²⁰⁶ Semuels, "What Amazon Does to Poor Cities."

²⁰⁷ Ibid.

Table 5. *Principal Sales Tax Remitters in the City of San Bernardino, Fiscal Year 2022.*

Business Name	Business Category
7 Eleven	Service Stations
76	Service Stations
Allstar Kia	New Motor Vehicle Dealers
Amazon Fulfillment Centre	Fulfilment Centres
Amazon MFA	Fulfilment Centres
Best Buy	Electronics/Appliance Stores
Chaparral Motorsports	Boats/Motorcycles
Chevron	Service Stations
Costco	Discount Dept. Stores
Diamond Chevrolet of San Bernardino	New Motor Vehicle Dealers
Dolls Kill	Fulfilment Centres
Fairview Ford	New Motor Vehicle Dealers
Home Depot	Building Materials
Kohls Distribution Centre	Fulfilment Centres
Michelin	Trailers/Auto Parts

Moss Bros Chrysler Dodge Jeep Ram Fiat	New Motor Vehicle Dealers
Ross	Family Apparel
Sams Club w/ Fuel	Discount Dept Stores
San Bernardino International Airport Authority	Aircraft Sales & Service
San Manuel Band of Mission Indians	Leisure/Entertainment
Stater Bros	Grocery Stores
Subaru of San Bernardino	New Motor Vehicle Dealers
Target	Discount Dept. Stores
Toyota of San Bernardino	New Motor Vehicle Dealers
Walmart	Discount Dept. Stores

*Source: Adapted from the City of San Bernardino’s Annual Comprehensive Financial Report, Fiscal Year Ended June 30, 2022.*²⁰⁸

San Bernardino’s primary industries consist of employers that hire workers with transferable, low level skills sets, such as sales employees in Walmart, or Home Depot, vehicle dealership between Subaru, Toyota and Chevrolet, or notably, worker concentration between Stater Bros. Markets and Amazon, which rely on workers with logistical training. These are characteristics of strong labour market concentration short of a labour monopsony established by Amazon.²⁰⁹ By cornering the market of other means of meaningful employment, Amazon has established a dominant presence similar to Pullman, remarkably even without

²⁰⁸ rep., *Annual Comprehensive Financial Report For the Fiscal Year Ended June 30, 2022*, p.171.

²⁰⁹ Willingham and Ajilore, “The Modern Company Town.”

heavily investing in spatial infrastructure. While Amazon offers better benefits than minimum wage jobs, Amazon under-delivers when compared to other jobs in the industry, such as Stater Bros. which pays two to three times higher than the minimum wage in an effort to retain workers.²¹⁰ As such, in truth Amazon's behaviour in the area can be viewed as disingenuous, and in fact a net negative to the city in the long run, which has only prospered in San Bernardino out of a dire economic situation generated out of the 2008 recession, the loss of jobs in the late 20th century at Kaiser Steel and Norton Air Force Base, and a failure on behalf of the city to diversify industries beyond automobile-oriented businesses. Therefore, San Bernardino should be classified as an emergent type of company town, where employers have discovered that monopsony power does not necessarily require heavy spatial investment to be secured and should be seen as a deficient example of company towns.

Nonetheless, the fact that Amazon operates business on two fronts must not be overlooked. Amazon logistics, whose impact on San Bernardino was just analysed, works in tandem with the Amazon website. Because Amazon's website is its first point of interaction for most to all online consumers, it is easy to visualise Amazon as a tech company, rather than a logistics company that utilises the Internet and various algorithms to facilitate sales. Kaoosji notes that Amazon is the only big tech company with a significant blue-collar workforce, which sets it apart as a unique example of company towns created by big tech.²¹¹ It must be noted that this is not the only company town Amazon or other big tech companies have created. In fact, company campuses which provide amenities apart from office space can be acknowledged as company towns as well.

²¹⁰ Semuels, "What Amazon Does to Poor Cities."

²¹¹ Alimahomed-Wilson et al., *The Cost of Free Shipping: Amazon in the Global Economy*, p.196.

5. Case Study 3: Googleplex, Mountain View, California, USA

5.1. Silicon Valley as a Site for New Remote Company Towns

If company towns are locations where employers go beyond providing basic amenities for employees by providing housing, food, and other supplies for employees, are there any examples where real company towns occur in modern day developments?

In 2017, it was noted that Amazon owned as much office space as Seattle's next 40 biggest employers combined.²¹² Its growing presence spurred developments in infrastructure to accommodate the tech giant. For instance, Amazon announced that it would house a homeless shelter in one of its new office buildings, donated USD\$10 million to the University of Washington in 2016, created plazas for public use and was involved in redeveloping the South Lake Union streetcar.²¹³ Just like San Bernardino, Amazon's involvement in Seattle can also be classified as a modern takeover company town, but it should be noted that Amazon Seattle is also unique for its break with other software company campuses, which tend to be established within suburban neighbourhoods in the tradition of Silicon Valley.²¹⁴

Hence for the sake of examining a wider range of companies and their respective towns, Silicon Valley was chosen as a site of examination of the modern *tabula rasa* archetype. Although corporate campuses exist within the Bay Area's suburbs, they can be considered as companies creating their own infrastructure because of a lack of commercially meaningful space in the area. For instance, figure 10 shows the land use around Google's Mountain View complex within a 6.25km² vicinity. Businesses are mostly industrial, if not owned by Google, while suburban residential areas were not varied enough to support walkable communities. However, Google has aimed to achieve the opposite through its corporate campus, the

²¹² Mike Rosenberg and Ángel González, "Thanks to Amazon, Seattle Is Now America's Biggest Company Town," The Seattle Times, November 30, 2017, [https://www.seattletimes.com/business/amazon/thanks-to-amazon-seattle-is-now-americas-biggest-company-to-wn/](https://www.seattletimes.com/business/amazon/thanks-to-amazon-seattle-is-now-americas-biggest-company-town/).

²¹³ Rosenberg and González, "Thanks to Amazon, Seattle Is Now America's Biggest Company Town."

²¹⁴ Ibid.

Googleplex. In this section of the report, Google’s pre-Alphabet era campus at Mountain View (Googleplex; Clive Wilkinson Architects, 1997-2001) will be studied as an exemplar of this category.

Figure 10. *Surrounding area in the vicinity of the Googleplex within a 1.25km radius at 1:625 scale with land distribution organised by colour.*



Source: Google Maps.

Owing to budget, circumstances and study scope constraints, the author was unable to visit Silicon Valley in person or examine all corporate campuses in the area, from Apple Park (Foster + Partners, 2017) to Facebook's Menlo Park headquarters (Frank Gehry, 2011). To compensate for this, the Googleplex was researched remotely, mainly relying on news articles, journal articles from JSTOR, and Google Maps and Google Earth services.

However, an initial understanding of Google's corporate campus culture can also be gained from watching the comedy film *The Internship* (2013) directed by Shawn Levy, which follows two middle-aged salesmen pursue a job at Google through its collegiate internship programme.²¹⁵ Although the film's cultural relevance is debatable, it is relevant to this study for its convincing portrayal of Google and the various services the Googleplex provides for its employees. For instance, Google worked closely with the producers providing insight on their campus and culture, from their summer internship programme to using 100 real Google employees (Googlers) as extras.²¹⁶ Google's presence in the film was so prominent, that critics viewed it as a Google commercial in disguise. Writing for the Boston Globe, Ty Burr called *The Internship* as 'the first film that's 100 percent product placement.'²¹⁷ Arguably, *The Internship* is the only film to extensively feature a modern-day corporate campus in real life, thus making it a viable candidate for study since in-person visits were not possible.

All in all, while the discoveries made at Google are in stark contrast to San Bernardino and share similarities with Pullman, Google does not invest in its workers in order to gain returns on investments, such as housing or businesses. However, it provides many amenities for its employees, such as voluntary employee housing

²¹⁵ *The Internship*, film (United States of America: 20th Century Fox, 2013).

²¹⁶ Heather Kelly, "Why Google Loves 'the Internship' | CNN Business," CNN, June 5, 2013, <https://www.cnn.com/2013/06/05/tech/innovation/internship-movie-google>. NB Most scenes were not filmed at Google, but at the Georgia Institute of Technology for productivity and privacy reasons at Google. Nonetheless, filming at GATECH was made to resemble Google's headquarters as closely as possible.

²¹⁷ Ty Burr, "Vince Vaughn and Owen Wilson Are Google Crashers - The Boston Globe," BostonGlobe.com, June 6, 2013, <https://www.bostonglobe.com/arts/movies/2013/06/05/vaughn-and-wilson-are-silicon-valley-crashers/kkKBjS8eE2Ky00JiOLQG31/story.html>.

off-campus, as well as numerous campus perks. It encourages its workers to enjoy the Googleplex as a comfortable place to work and innovate as much as possible for the company, blurring the distinction between work and home to foster an ideal of a creative, productive space. Nonetheless, this is motivated by employee retention created within a competitive software innovation environment, which places high emphasis on productivity. In short, corporate campuses act as company towns that prefer incentives over disincentives to motivate their employees into contributing to a toxic work-focused culture that overrides a work-life balance.

5.2 Creating the Googleplex

Corporate campuses trace their origins back to the ‘golden years’ of Silicon Valley and the establishment of Xerox PARC. Researchers at PARC embraced open exchange and experimentation, which resulted in campus-like office designs. Eventually, this morphed into work/play environments in the 21st century, such as Google’s.²¹⁸ Designed by Clive Wilkinson Architects (CWA), the Googleplex is a portmanteau of the words, ‘Google’ and ‘Complex’.²¹⁹ CWA sought to break tradition from traditional office spaces, as did PARC, and aimed to create ‘buildings that foster teamwork and creativity’ using a programme of unique facilities within an intense productivity atmosphere.²²⁰ Google founders Sergey Brin and Larry Page approached CWA with the intent of mimicking university campus designs, using Stanford University as a reference point.²²¹ Therefore, Google avoided typical office design, which can be broadly characterised as consisting of desk space, conference space and a lunchroom. The Googleplex was created with 13 different possible settings depending on levels of interaction, from independent work or informal group

²¹⁸ Christoph Lindner, Gerard F. Sandoval, and Jenny Lin, “Silicon Wafers and Office Park Dreams: Cross-Cultural Designs, Aesthetics, and Art in and around California’s Santa Clara Valley,” essay, in *Aesthetics of Gentrification Seductive Spaces and Exclusive Communities in the Neoliberal City* (Amsterdam: Amsterdam University Press, 2021), 49–71.

²¹⁹ Georgios Eftaxiopoulos, “The Largest Room in the World,” *AA Files* 77 (2020): 89–101, <https://www.jstor.org/stable/27124630>, p.5.

²²⁰ Eftaxiopoulos, “The Largest Room in the World., p.5”

²²¹ Bobby Allyn, “Architect behind Googleplex Now Says It’s ‘Dangerous’ to Work at Such a Posh Office,” NPR, January 22, 2022, <https://www.npr.org/2022/01/22/1073975824/architect-behind-googleplex-now-says-its-dangerous-to-work-at-such-a-posh-office>.

collaboration, to lecture-style tech talks packed within close range to encourage spontaneous interaction.²²²

The Internship reveals that Googlers enjoy plenty of perks that make the Googleplex appear as a place where work can be practiced in an inspiring, playful environment demonstrated in figures 11-16. Stills from the film showcase Google as a ‘fun’ workplace by blurring the distinction between work and employee well-being by arranging recreational facilities and employee-exclusive perks in close proximity of workspaces.

²²² “The Googleplex and the Rise of the Corporate University Campus,” Office Snapshots, November 28, 2014, <https://officesnapshots.com/articles/the-googleplex-and-the-rise-of-the-corporate-university-campus/>.



Figure 11. *Still from The Internship (27:26). Google displays a replica of SpaceShipOne on the left as an inspiring monument that alludes to Google's vision as an innovative environment, while an employee uses an office slide on the right.*



Figure 12. *Still from The Internship (27:52). All food at the Googleplex is free for Googlers, an unorthodox move that seems unprofitable and would certainly make Pullman's 'return on investment' strategy raise eyebrows.*



Figure 13. *Still from The Internship (35:06). Housing is provided for various employees, not least interns. If workers choose to commute, they are provided with shuttle buses to city areas.*²²³



Figure 14. *Still from The Internship (43:12). Free in-house dry cleaning for employees.*

²²³ Brian Anthony Hernandez, "Real Google Interns: 'the Internship' Movie Kind of Nails It," Mashable, March 11, 2022, <https://mashable.com/archive/google-the-internship>.



Figure 15. *Still from The Internship (1:01:00). Employees have the option to unwind in public nap pods.*



Figure 16. *Still from The Internship (1:01:26). Work is directly located next to places of play, such as the pool table in the bottom of the still, and a pantry on middle left.*

Although internal company data cannot be accessed, Google appears to be running most of these amenities for Googlers at a loss—with the clearest example being free, quality meals at all of Google’s campus restaurants, and pantries scattered across the complex. In fact, Google’s work-play environment set a high bar for office standards, leading other Silicon Valley giants to follow suit.²²⁴ From 2012 to 2017, *Fortune*

²²⁴ Allyn, “Architect behind Googleplex Now Says It’s ‘Dangerous’ to Work at Such a Posh Office.”

Magazine rated Google as the best company to work for on its *100 Best Companies to Work For* annual ranking.²²⁵ In its 2012 review, it cited employees' love for Google's mission, company culture as well as the Googleplex's famous perks.²²⁶ From 2008 to 2023, the employment review website Glassdoor also recognised Google amongst their own top rankings, attributing its success to competitive compensation and benefits for employees and clear growth opportunities, amongst other factors.²²⁷

The fact that Google provides these services is not inherently bad. However, it can be argued that all these benefits are provided in hopes of retaining employees, and consequently boost productivity to compete with other software companies in a challenging environment.

5.3 Google as a Revolving Door?

Companies are incentivised to retain employees within their organisation for any number of reasons. Resignation increases short term costs related to hiring, rearranging personnel, training other employees to replace the resignee, as well as lowered productivity. In the long run, long-time employees resigning results in the loss of organisation-specific knowledge and skills.²²⁸ Industries with higher skill requirements are therefore enticed to retain employees who carry valuable skills. In this case, Google's need for personnel with competent programmers is in line with its wide offerings of non-statutory employee benefits and constitutes a paradigm shift from Amazon's treatment of San Bernardino workers. Even so, both companies have high amounts of employees spending short-lived positions. On one hand, Amazon warehouse workers last

²²⁵ David Carrig, "This Company Is Fortune's Top Place to Work for 6th Year in a Row," USA Today, March 10, 2017,

<https://www.usatoday.com/story/money/business/2017/03/09/fortune-top-places-to-work-google/98953070/>.

²²⁶ "100 Best Companies to Work For," CNNMoney, 2012,

<https://money.cnn.com/magazines/fortune/best-companies/2012/snapshots/1.html>.

²²⁷ Ashton Jackson, "How Google, Bain & Company Have Stayed on This Best Places to Work List for 15 Years," CNBC, January 13, 2023,

<https://www.cnbc.com/2023/01/13/google-bain-company-make-glassdoor-best-places-to-work-since-2009.html>.

²²⁸ Hiroshi Yamamoto, "The Relationship between Employee Benefit Management and Employee Retention,"

The International Journal of Human Resource Management 22, no. 17 (2011): 3550–64,

<https://doi.org/10.1080/09585192.2011.560871>.

approximately eight months.²²⁹ On the other hand, in 2017 Google employees lasted approximately 1.90 years on average.²³⁰ Neither of these durations are particularly long for corporate retention rates. For instance, resume.io's top three companies for retention in 2023 were HSBC Bank USA, Neutrogena and Merck & Co. The median tenure at HSBC and Neutrogena were both 10.2 years, while Merck & Co. employees typically served up to 9.8 years.²³¹ Whereas it has already been established that Amazon's median warehouse tenure can be attributed to poor workplace practices, Google's attrition rate can be attributed towards the precarious nature of the software industry. On average, employees at Facebook lasted 2.02 years, while at Apple, Twitter and Microsoft, tech workers lasted 1.85, 1.83, and 1.81 years respectively.²³² It is postulated that tech workers may work at large companies for short tenures in order to gain easier hiring opportunities elsewhere.²³³ Talent poaching is also a concern. From 2015 to 2017, Amazon was able to 'steal' 30 top executives from Microsoft with large signing bonuses.²³⁴ Competition also extends towards products. For example, when Elon Musk bought Twitter in 2022, a series of unpopular changes led users to abandon Twitter in search of alternatives. Meta launched the clone app, Threads, as a direct result, drawing tens of millions of users in its first week.²³⁵ This can be seen as Meta attempting to take over a previously-occupied sector of the microblogging market. All in all, the software industry can be seen as highly Darwinistic given its disruptive capabilities.

²²⁹ Richard Currie, "Amazon Fears It Could Run out of US Warehouse Staff by 2024," The Register, June 23, 2022, https://www.theregister.com/2022/06/22/amazon_labor_pool_shortage/.

²³⁰ Becky Peterson, "Travis Kalanick Lasted in His Role for 6.5 Years - Five Times Longer than the Average Uber Employee," Business Insider, August 20, 2017, <https://www.businessinsider.com/employee-retention-rate-top-tech-companies-2017-8>.

²³¹ Lotte van Rijswijk, "The Companies Employees Don't Want to Leave," Resume.io, May 9, 2023, <https://resume.io/blog/the-companies-employees-dont-want-to-leave>.

²³² Peterson, "Travis Kalanick Lasted in His Role for 6.5 Years - Five Times Longer than the Average Uber Employee."

²³³ Jeff Haden, "Why Google's High Turnover Rate Is Great for Employees - and Possibly Even for Google," Inc Magazine, June 16, 2022, <https://www.inc.com/jeff-haden/why-googles-high-turnover-rate-is-great-for-employees-and-possibly-even-for-google.html>.

²³⁴ Eugene Kim, "Here's How Amazon Is Able to Poach so Many Execs from Microsoft," CNBC, June 26, 2018, <https://www.cnbc.com/2018/06/25/amazon-favorite-poaching-ground-microsoft.html>.

²³⁵ The Associated Press, "Twitter Threatens Legal Action against Meta over Its New Rival App Threads," AP News, July 7, 2023, <https://apnews.com/article/twitter-meta-threads-lawsuit-6a56a5d35a8d54cbcf834fc061ae8ffd>.

The competitive nature of software companies, low physical barriers to software production compared to heavy industries, and the flexible application of programming languages leads to an intense pace of work in the name of innovation. Facebook's internal motto, "move fast and break things," a phrase meant to encourage Facebook developers to innovate and disrupt market status quo, has come to encapsulate the attitude of many startups today.²³⁶ Google is particularly hungry for growth, constantly acquiring and shedding dead weight. By 2017, it acquired over 200 startups, and has launched many of its own innovations to diversify its offerings.²³⁷ However, as of August 2023 it has also killed more than 280 of its startups to streamline efficiency.²³⁸ Projects are just as precarious as software workers within the company than is popularly portrayed. On Glassdoor, Google has over 46,000 employee reviews. In 2013, a program manager wrote a review, captioned: "Moving at the speed of light, burn out is inevitable," criticising Google's work culture. This review was deemed 'most helpful' by Glassdoor users, gaining over 3700 likes:

"What balance? All those perks and benefits are an illusion. They keep you at work and they help you to be more productive. I've never met anybody at Google who actually time off on weekends or on vacations. You may not hear management say, "You have to work on weekends/vacations" but, they set the culture by doing so - and it inevitably trickles down [...] I have seen way too many of the following: marriages fall apart, colleagues choosing work and projects over family, colleagues getting physically sick and ill because of stress, colleagues crying while at work because of the stress, colleagues shooting out emails at midnight, 1am, 2am, 3am. It is absolutely ridiculous and something needs to change."²³⁹

²³⁶ Hemant Taneja, "The Era of 'Move Fast and Break Things' Is Over," Harvard Business Review, January 23, 2019, <https://hbr.org/2019/01/the-era-of-move-fast-and-break-things-is-over>.

²³⁷ Vicky Huang, "Google Has Acquired 200 Companies since 2001 - Here Are Its Biggest Failures," TheStreet, January 14, 2017, <https://www.thestreet.com/opinion/google-s-moonshots-make-crash-landing-13952508>.

²³⁸ "Killed by Google: Google Graveyard," Google, accessed August 23, 2023, <https://killedbygoogle.com/>.

²³⁹ Anonymous, "Google Reviews: What Is It like to Work at Google? | Glassdoor," Glassdoor, June 21, 2013, <https://www.glassdoor.com/Reviews/Google-Reviews-E9079.htm>.

5.4 Spatially Reinforcing Work Culture Through the Googleplex

The holistically competitive work culture in Silicon Valley leads to a strong desire from the employer to push its employees to innovate, where the corporate campus is complicit in enabling an over-competitive work culture. In retrospect, Clive Wilkinson, designer of the Googleplex, found that its on-site perks made workers too dependent on the company.²⁴⁰ “Work-life balance cannot be achieved by spending all your life on a work campus [...] it also drains the immediate neighborhoods of being able to have a commercial reality,” Wilkinson said in an interview to NPR. As a result of Google directly fulfilling their needs, employees have no reason to leave campus to explore local cafes, restaurants or grocery stores.²⁴¹ In July 2006, a *Metropolis* article outlined software engineer Corin Anderson’s regular day at the Googleplex. “When he wants a snack, he walks to the fully stocked micro-kitchen, maybe breaking open a bag of organic potato chips or grabbing a handful of trail mix [...] And strangest of all, come nightfall he often has no desire to go home, preferring to get dinner, gratis, in one of the employee cafés, followed by a few hours playing a strategic card game with some colleagues in a small meeting room,” the introduction read.²⁴² In another article from *Mashable*, one intern reported that he ‘gave’ Google an extra three hours of work daily by getting work done on Google employee commuter buses.²⁴³ Although employees are passionate about their work at Google, bolstered by the luxurious benefits at the workplace, their real financial situation is undercompensated for an environment of intense production. In a 2021 survey by Indeed.com, 48% of 201 current and former employees reported that Google did not support overtime pay.²⁴⁴ Even so, workers can work from twelve to fourteen hours daily including uncounted hours, leaving workers the option to spend

²⁴⁰ Bobby Allyn, “Architect behind Googleplex now says It’s ‘dangerous’ to work at such a posh office,” NPR, January 22, 2022, <https://www.npr.org/2022/01/22/1073975824/architect-behind-googleplex-now-says-its-dangerous-to-work-at-such-a-posh-office>.

²⁴¹ Allyn, “Architect behind Googleplex now says It’s ‘dangerous’ to work at such a posh office.”

²⁴² Jade Chang, “Designing the First ‘Googleplex’ Office,” *Metropolis*, July 2006, <https://metropolismag.com/projects/googleplex-google-hq-clive-wilkinson/>.

²⁴³ Hernandez, “Real Google Interns: ‘The Internship’ Movie Kind of Nails It.”

²⁴⁴ “Google Salaries: How Much Does Google Pay?,” Indeed.com, accessed August 23, 2023, <https://www.indeed.com/cmp/Google/salaries>.

the night in their office building.²⁴⁵ Unfortunately, the Googleplex's amenities only serve to facilitate worker exploitation. With food, beds and showers provided for Googlers, it reinforces the concept of 'why go home when everything is here?'²⁴⁶ All in all, the Googleplex can be said to play an active role in aiding worker overtime in an unhealthy manner.

5.5 Concluding Findings from the Googleplex

Investigating the Googleplex revealed that while blurring the distinction between work and play fostered a more creative and inspiring environment within Google, Google overstepped its corporate social responsibility in a manner similar to Pullman by enticing its workers to stay as close to their sites of production as possible. Whereas Pullman's industrial culture was firmly entrenched in practices of set working hours and aimed to maximise profits made from employees by directing funds spent by employee-residents into the 'local' Pullman economy which the Pullman Company internalised through ownership, Google fostered an intense workplace culture differently. Strong competition within the software industry puts pressure on employees to innovate faster than their competitors, leading to a work culture that regularly expects uncompensated overtime. Google thus engaged with corporate image-making, as did Pullman, using benefits to simultaneously champion itself as one of the best workplaces in the world, and sustain productivity by reducing turnover rates. In this case, workers are investment vehicles because they are considered valuable to the company, not because employees can provide monetary returns on investment. This is a sharp contrast to Amazon's warehouse workers, whose physically intense jobs can be more easily trained, thus lowering their value to the workforce. However, profit margins also affect the quality of benefits companies are capable of providing. For example, Amazon's intense focus on worker efficiency suggested that it was incapable of establishing beneficial spatial infrastructure to employees

²⁴⁵ Alim Tharani, "'Googleplex Cultures': A Marxist Analysis of Silicon Valley Workplace Cultures," *Global Issues, Changing Times* 2, no. 1 (November 30, 2020): 1–4, <https://doi.org/https://doi.org/10.31542/cb.v2i1.1995>.

²⁴⁶ Tharani, "'Googleplex Cultures': A Marxist Analysis of Silicon Valley Workplace Cultures."

without incurring a loss. Similarly, a study of sanitation in coal towns during the 1920s revealed that the quality of sanitation in company towns varied in response to cost-related factors.²⁴⁷ Where it was cheaper, company towns typically provided better sanitation, in the hopes of placating mobile workers which could move from town to town.²⁴⁸ These relationships are expressed in figure 17.

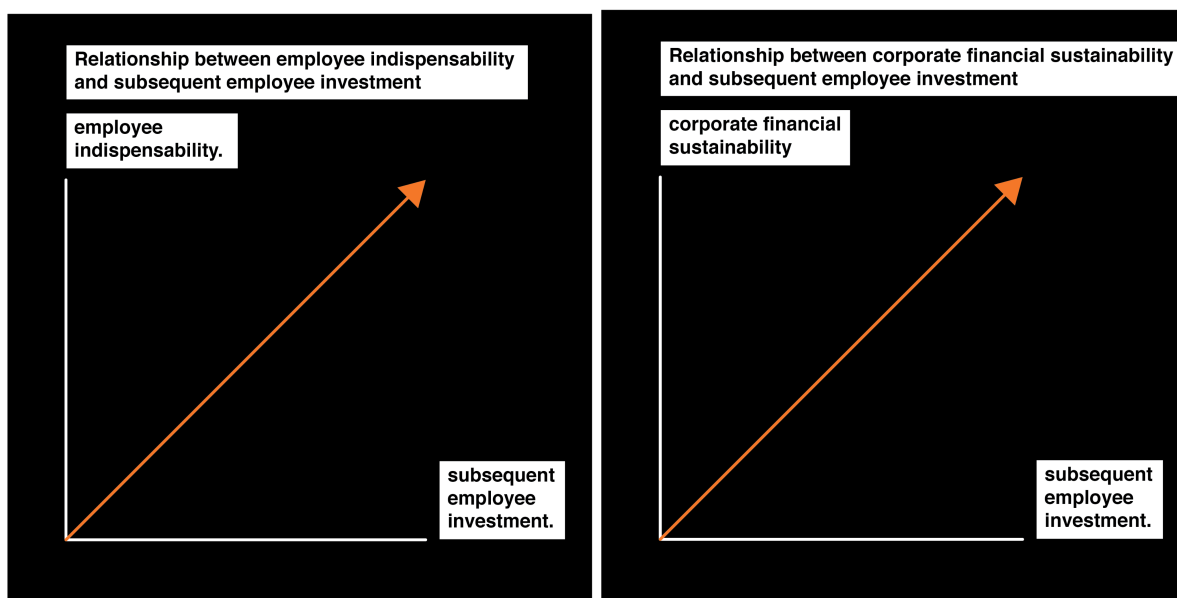


Figure 17. *Relationship between employee skill level and amount of physical and social benefits invested into employees.*

In short, companies are strongly incentivised to keep employees where financially sustainable, and where employees are also viewed as invaluable. Physical proximity between the workplace and living necessities, where the latter can be artificially supplied by the company where private entrepreneurs fail to fill the market gap, is of incredible importance to *tabula rasa* company towns, which act as corporate enclaves that entice the employee to stay as long as possible in both the short and long term. Regardless, all company towns can be visualised as attempts to form and consolidate monopsony power.

²⁴⁷ Price V. Fishback and Dieter Lauszus, “The Quality of Services in Company Towns: Sanitation in Coal Towns during the 1920s,” *The Journal of Economic History* 49, no. 1 (1989): 125–44, <https://doi.org/10.1017/s0022050700007361>.

²⁴⁸ Fishback and Lauszus, “The Quality of Services in Company Towns: Sanitation in Coal Towns during the 1920s,” p.125, p.139.

Having examined three American sites of intense corporate production, can an international perspective provide insight into how, if at all, company towns could act less exploitatively towards its workers? The final town, Ludwigshafen, in Germany, will be examined as a model of historical takeover company towns to learn improvements from.

6. Case Study 4: Ludwigshafen, Rhineland-Palatinate, Germany

6.1 Contextualising Ludwigshafen in the Prewar Period

The German multinational chemical producer, Badische Anilin-und Sodafabrik SE (BASF), has operated in Ludwigshafen since 1865, where the town continues to be the global headquarters of BASF operations.²⁴⁹ However, Ludwigshafen should be considered a takeover town given its previous history. In 1606, the Rheinschanze Palatinate fortress was built along the Rhine River as a military means of securing the Rhine crossing.²⁵⁰ By the end of the 18th century following the French Revolution and the Napoleonic Wars, the Palatinate fortress came to be obsolete.²⁵¹ By 1842, it had become an economically significant free port taking advantage of increasing shipping traffic along the Rhine.²⁵² In 1856, coal tar was discovered to be a viable raw material for synthetic dyes.²⁵³ In 1865, a German businessman named Friedrich Engelhorn, the owner of a coal gas company in Mannheim, the neighbouring town across the Rhine, recognised an opportunity to take advantage of coal produced. In addition, Engelhorn also realised that he could take advantage of a company that internalised the entire manufacturing process from raw and auxiliary materials.²⁵⁴ This processing strategy, known as *verbund*, revolutionised industrial practices. Thus, BASF was founded on April 6, 1865. However, as Engelhorn could not acquire land in Mannheim, he established the BASF plant in Ludwigshafen, which was part of the Kingdom of Bavaria at the time.²⁵⁵

BASF grew in enormous importance to Germany due to its relevance by researching synthesized ammonia in the early 20th century. While artificial nitrogen-based fertilisers secured food supplies for a growing German

²⁴⁹ Peter Phillimore et al., “Residents, Regulators, and Risk in Two Industrial Towns,” *Environment and Planning C: Government and Policy* 25, no. 1 (2007): 73–89, <https://doi.org/10.1068/c0618j>, p.73.

²⁵⁰ “Ludwigshafen Am Rhein in Der Pfalz,” *Geschichte der Stadt Ludwigshafen*, accessed August 24, 2023, <https://www.regionalgeschichte.net/index.php?id=14755>.

²⁵¹ “Ludwigshafen Am Rhein in Der Pfalz.”

²⁵² *Ibid.*

²⁵³ BASF, “1865 / Foundation of Badischen Anilin- & Sodafabrik,” BASF, accessed August 24, 2023, <https://www.basf.com/global/en/who-we-are/history/chronology/1865-1901/1865.html>.

²⁵⁴ BASF, “1865 / Foundation of Badischen Anilin- & Sodafabrik,”

²⁵⁵ *Ibid.*

population, BASF also played a role in both World Wars. In the First World War, Germany used its monopoly hold on nitrogen to convert ammonia into nitric acid for explosives.²⁵⁶ In the interwar period it was conglomerated with five other chemical producers, forming I.G. Farbenindustrie AG (IG Farben) to streamline production and sales in 1925. By 1933, IG Farben was essential to the Nazi regime for its production of nitrogen and gasoline, amongst other products.²⁵⁷ Therefore, because Mannheim had no industrial facilities of military importance, it was spared most of the destruction that befell Ludwigshafen during the Second World War. On one hand many historical establishments in Mannheim survived the war, such as the Mannheim *Wasserturm* (Water Tower, 1886-1889) and the University of Mannheim (est. 1907). On the other hand, the Allied bombing campaign aimed to put IG Farben plants, including the one at Ludwigshafen out of commission, using heavy munitions. Figure 18 shows a bombing raid on Ludwigshafen in 1944, which crippled Ludwigshafen's production capability. All in all, Germany's post-war destruction set the stage for BASF to 'take over' Ludwigshafen, but extended well into the present era.

²⁵⁶ M Hamlin, "Monopoly for Nitrogen Products in Germany," *Journal of Industrial & Engineering Chemistry* 7, no. 7 (1915): 631–631, <https://doi.org/10.1021/ie50079a036>; BASF, "1914 – 1918 / First World War," 1914-1918, accessed August 24, 2023, <https://www.basf.com/global/en/who-we-are/history/chronology/1902-1924/1914-1918.html>.

²⁵⁷ BASF, "1925 / Foundation of I.G. Farbenindustrie AG," BASF, accessed August 24, 2023, <https://www.basf.com/global/en/who-we-are/history/chronology/1925-1944/1925.html>. NB IG Farben was an accomplice in enabling atrocities under the Nazi regime. This ranged from manufacturing Zyklon B, which was used to gas Holocaust victims, to employing prisoners of war at IG Farben's Buna plant at Auschwitz.



Figure 18. *A south-facing aerial view of Ludwigshafen, Germany on September 13, 1944. The explosion cloud shown in this photo lies directly above the Ludwigshafen plant and covers approximately >1 sq² kilometre, showing the level of destruction at the former BASF plant.*²⁵⁸

²⁵⁸ photograph, *Aerial View of Bombing of Ludwigshafen, Germany* (Independence, MI: National Archives, 1944), Harry S. Truman Presidential Library & Museum, <https://www.trumanlibrary.gov/photograph-records/2015-2442>.

In the aftermath of World War Two, IG Farben facilities were occupied by various Allied forces. For example, Leverkusen belonged to the British occupation, Halle and Marseburg to the Soviets, and Ludwigshafen to the French, while Mannheim on the opposite bank of the Rhine belonged to the US by July 1945.²⁵⁹ Because IG Farben had contributed a significant amount of direct aid towards the German war effort, the Allied Control Council's Four Power Committee declared that IG Farben would be broken up into its constituent companies prior to the 1925 merger.²⁶⁰ Each former IG Farben plant would be an independent enterprise. Therefore, BASF was reconstituted using Ludwigshafen as its base of operations, setting the stage for post-war Ludwigshafen.²⁶¹

6.2 Social Support in a Burgeoning Economy

By the end of the Second World War, Ludwigshafen was in a situation similar to most war-torn cities across Europe. However, BASF's reconstitution and the 'blank slate' left from the war enhanced the German economic miracle's role in transforming Ludwigshafen into a city with strong support for city-led social programmes in the 1960s and 1970s.

As a site of wartime production, up to 80% of Ludwigshafen's inner city districts were destroyed during the Second World War.²⁶² On the bright side, it was equipped with the means to rebound quickly. Granted that IG Farben's assets, which were mainly in the form of immobile manufacturing facilities, the BASF plant at Ludwigshafen was virtually impossible to uproot, fortifying Ludwigshafen as a chemical manufacturing city after the war. The BASF plant was based on the *verbund* principle—a tightly integrated manufacturing process that recycled by-products for efficiency which might have been hard to dismantle in a partial

²⁵⁹ Kudo Akira, "The Political Process of IG Farben's Dissolution," essay, in *The Japanese and German Economies in the 20th and 21st Centuries: Business Relations in Historical Perspective* (Folkestone, UK: Renaissance Books, 2018), 162–218, p.162-163.

²⁶⁰ Akira, "The Political Process of IG Farben's Dissolution," p.165.

²⁶¹ Ibid, p.171.

²⁶² Stephan Morz, "Stadt Ludwigshafen Am Rhein Stadtarchiv," Wachstum am Rhein: Kurze Geschichte der "Stadt der Chemie," accessed August 24, 2023, <https://www.ludwigshafen.de/lebenswert/stadt-am-rhein/stadtgeschichte>.

manner. In addition, BASF's facility was a complex of staggering scale. The Ludwigshafen facility covers over 10 square kilometres today, with over 125 production plants in an interconnected value chain.²⁶³ In comparison, the Azovstal steel and iron works in Mariupol, Ukraine, covers over 11 square kilometres.²⁶⁴ Although Allied plans called for various moves, from dismantlement and dissolution by the US, to equipment repatriation from Germany to France, to Soviet confiscation of equipment, the main Ludwigshafen plant managed to avoid dismemberment. This was achieved through resistance from both German management and labour.²⁶⁵ By leaving what was left of the Ludwigshafen plant intact, BASF was able to revamp large-scale production quickly following the war.²⁶⁶ By 1948, BASF had over 20,000 employees at its plant.²⁶⁷ This coincided with the German economic miracle which lasted from 1948 to 1973. Therefore, Ludwigshafen rebuilt itself with BASF as its industrial centrepiece in a style that followed larger reconstruction movements in architecture at the time. Reconstruction in Europe and Asia was influenced by the Congrès Internationaux d'Architecture Moderne (CIAM), which saw opportunities to establish radical urban master plans focused on modernisation and higher living standards.²⁶⁸ In Ludwigshafen, this involved large-scale infrastructure projects, such as elevated highways. These projects began in the 1950s and culminated in an elevated highway plan found in figure 19 by 1980.²⁶⁹

²⁶³ Philip Oltermann, "How Gas Rationing at Germany's BASF Plant Could Plunge Europe into Crisis," *The Guardian*, September 15, 2022,

<https://www.theguardian.com/business/2022/sep/15/gas-rationing-germany-basf-plant-europe-crisis>.

²⁶⁴ Benay Ozdemir, "Kateryna's Workplace Has Become Mariupol's Last Pocket of Resistance against Russia," *ABC News*, April 23, 2022,

<https://www.abc.net.au/news/2022-04-23/inside-azovstal-steelworks-last-stand-mariupol-ukraine-russia/101006624>.

²⁶⁵ Akira, "The Political Process of IG Farben's Dissolution," p.171.

²⁶⁶ *Ibid.*

²⁶⁷ BASF, "1948 / Reconstruction and Explosion," BASF, accessed August 25, 2023,

<https://www.basf.com/global/en/who-we-are/history/chronology/1945-1964/1948.html>.

²⁶⁸ Richard Koshalek et al., "Re-Examining Architecture and Its History at the End of the Century," essay, in *At the End of the Century: One Hundred Years of Architecture* (Los Angeles, LA: Museum of Contemporary Art, 1998), 63–99, p.63.

²⁶⁹ Ludwig Oberbürgermeister and Schoenmakers Beigeordneter, *Hochstraße Nord Ludwigshafen Am Rhein: Ein Vierteljahrhundert Hochstrassenbau in Ludwigshafen Am Rhein* (Ludwigshafen, DE, 1980).

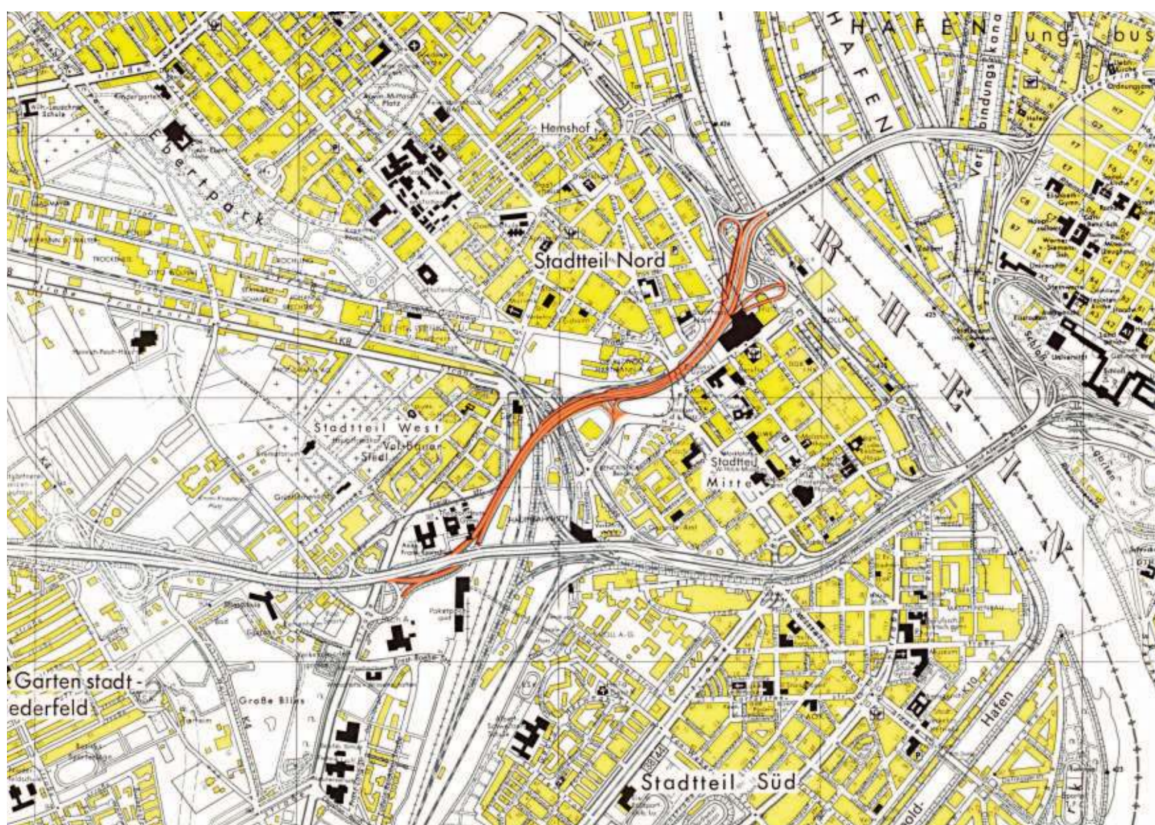


Figure 19. Figure-ground map of several elevated highway projects running through Ludwigshafen by 1980.²⁷⁰

By the 1960s and 1970s, the City of Ludwigshafen could be said to be doing well for itself. In the 1970s, the Ludwigshafen city council initiated programmes such as the business development branch which succeeded in bringing in American businesses such as the Ramada hotel chain, and a Metro supermarket.²⁷¹ Between 1969 and 1974, the weekly working time was also reduced from 45 to 40 hours a week, signaling economic enlightenment.²⁷² By 1973, the city council had also formed eight working groups, including: traffic, education, open spaces, sport, social affairs, health, economy, housing construction and administrative structure.²⁷³ Therefore, the Ludwigshafen city government was allowed to create abundant municipal

²⁷⁰ Oberbürgermeister and Beigeordneter, *Hochstraße Nord Ludwigshafen Am Rhein*.

²⁷¹ City of Ludwigshafen, *Informationen Zur Stadtentwicklung: 100 Jahre Städtestatistik in Ludwigshafen Am Rhein* (Ludwigshafen, DE: Ludwigshafen Stadt am Rhein, 2014), https://www.ludwigshafen.de/fileadmin/Websites/Stadt_Ludwigshafen/Nachhaltig/Stadtentwicklung/Veroeffentlichungen/PDF/100_Jahre_Staedtestatistik_in_Ludwigshafen_am_Rhein.pdf, p.60.

²⁷² City of Ludwigshafen, *Informationen Zur Stadtentwicklung: 100 Jahre Städtestatistik in Ludwigshafen Am Rhein*, p.60.

²⁷³ *Ibid.*

services during an era of West German prosperity. Both highway infrastructure projects and the opening of various civil departments necessitated funds, which can be attributed to BASF's successful presence in the area. Several first-hand accounts of Ludwigshafen residents attributed the city's financial boom to BASF's taxable presence, which resulted in well-funded schools, abundant swimming pools, museums, a theatre, etc.²⁷⁴ However, as business stagnated by the 1980s, German neoliberal tax reforms allowed BASF to file taxes elsewhere, which decreased the city's income and arguably weakened city institutions as a direct result.²⁷⁵

6.3 BASF Steps Up

Because the city government was deprived of tax capital, a decline in social services would be noticeable. In a 1986 analysis of business tax that called for tax reforms, municipal financial problems led to cuts on expenditure, particularly in infrastructure maintenance and social service. Business tax was also identified as the most important source of municipal income.²⁷⁶ It can be imagined that Ludwigshafen was not exempt, and thus a decline in city services would be significantly noticeable. It could therefore be argued that BASF provides its own services in lieu of city services, likely due to the fact that production and corporate offices, and therefore blue-collar and white-collar workers, are coupled together side by side both physically and hierarchically. However, a secondary motive to contribute to the area may be attributed to corporate image-making reasons as well.

BASF has diversified its holdings beyond chemical production. At Ludwigshafen, BASF mostly offers hospitality facilities that can be rented by the public for various uses. For example, the Gesellschaftshaus

²⁷⁴ Rewboss, "Is This Germany's Ugliest City? Ludwigshafen Am Rhein," YouTube, June 30, 2022, <https://www.youtube.com/watch?v=23hsMyt--38>, comment by @mickimicki. While specific data or laws could not be found regarding BASF and Ludwigshafen's relationship in the 1970s, several other comments corroborate this perspective.

²⁷⁵ Rewboss, "Is This Germany's Ugliest City? Ludwigshafen Am Rhein," comment by @CieFood.

²⁷⁶ H Karrenberg, "Reform of the Business Tax in Germany," *Environment and Planning C: Government and Policy* 5 (1987): 59–67.

(society house) was a casino with a library, reading room and smoking room that was renovated as a private venue that could house up to 180 guests.²⁷⁷ BASF also runs the Hotel René Bohn, a four star hotel, and a wine cellar with up to 2,000 varieties of wine.²⁷⁸ Apart from that, BASF has gone on to create facilities for its employees as part of its balanced work-life initiative. The LuMit (Ludwigshafen-Mitarbeiter; English: Ludwigshafen-employees) centre includes a nursery (LuKids), and a large fitness and health studio (LuFit).²⁷⁹ However, it must be acknowledged that BASF's commitment towards employees have lasted long before the end of the German economic miracle. As early as 1872, BASF began construction for the Hemshof colony, a residential centre for workers.²⁸⁰ In fact, much of the hospitalities run by BASF today all have historical origins. The wine cellar, for instance, originated to ensure a supply of wine was available for clients, partners and suppliers, in an age where winemaking was a common practice.²⁸¹ Regardless, progressive company benefits stagnated until the 2000s, with the exception of introducing extended paternity leave in 1986.²⁸² Most facilities that characterised BASF as a factory town either extended from a period of classical liberalism that expected corporations to provide social benefits, or in a period that followed contractionary state measures.²⁸³ Hence, BASF stepped up in times of an absent state, demonstrating that corporations are capable of filling civic inadequacies as part of a 'takeover'. BASF arguably understood its social responsibility to Ludwigshafen from an early stage due to its importance to the company in terms of production and executive capacity. The site of its corporate headquarters was

²⁷⁷ BASF, "Locations," BASF, accessed August 25, 2023, https://www.basf.com/global/en/who-we-are/organization/locations/europe/german-sites/ludwigshafen/neighbor-basf/gastronomy/locations.html#accordion_v2-d6aed1ef92-item-1ababaa141.

²⁷⁸ BASF, "Locations."

²⁷⁹ BASF, "Lumit – the Employee Center for Work-Life-Management," LuMit – The employee center for Work-Life-Management, accessed August 25, 2023, https://www.basf.com/global/en/who-we-are/organization/locations/europe/german-sites/ludwigshafen/working-at-the-site/work-life-management/LuMit.html#accordion_v2-4820ed6f2a-item-1645033992.

²⁸⁰ BASF, "Company Benefits," Company Benefits, accessed August 25, 2023, https://www.basf.com/global/en/who-we-are/history/responsibility/doctors_education_communityservice/company-benefits.html.

²⁸¹ Cyndi Young, "BASF Wine Cellars Home to One Million Bottles," *Brownfield Ag News*, October 10, 2013, <https://brownfielddagnews.com/2013/10/basf-wine-cellars-home-million-bottles/>.

²⁸² BASF, "Company Benefits."

²⁸³ "Carl-Bosch-Siedlung in Frankenthal Bei Ludwigshafen/Rh.," *Deutsche Bauzeitung* 100 (July 1, 1966): 553–61. Corporate construction was active during the economic miracle such as this example of a closed community complex (1956-1966), but arguably this was also carried over from pre-war practices.

Ludwigshafen when it was established in 1865, and has remained so to this day. Figure 20 shows the distribution of office and production space at the Ludwigshafen plant today. Although chemical production overwhelmingly outweighs office space, chemical production is inherently a space-intensive operation, whereas offices can be more compact. This is in contrast to Amazon's space-intensive operations which are completely emancipated from office sites.



Figure 20. *Land usage distribution map of BASF's headquarters in Ludwigshafen in the present-day at 1:10,000 scale.*

Once again, employee retainment could be argued as a strong motive to commit BASF to the surrounding area. For starters, the wine cellar was also used to entice job candidates to join operations in Ludwigshafen as the climate in Ludwigshafen could not support winemaking.²⁸⁴ Meanwhile, the Gesellschaftshaus (1898-1900) was originally founded as a building for directors and authorised officers, amongst other characters, to have lunch near the factory. This showed that company authorities were living and operating in many of the same conditions that its chemical workers underwent. Unlike Amazon, whose Seattle headquarters are over 1,500 miles away from sites of pollution in San Bernardino, offices in Ludwigshafen were side by side with pollutant-producing factories shown in figure 21.



Figure 21. *BASF's Ludwigshafen plant produced heavy amounts of visible smoke in 1910.*²⁸⁵

Because white-collar and blue-collar chemical workers are both in close proximity to pollutants produced by the complex, executives are directly incentivised to improve working conditions. From 1903 to the present,

²⁸⁴ Young, "BASF Wine Cellars Home to One Million Bottles."

²⁸⁵ BASF, *Still a Sign of Progress and Growth: In the Beginning of the 20th Century, the Chimneys of the Ludwigshafen Plant Smoke and Smolder. In the Meantime, Emphasis Has Been Placed on Environmental Protection Not Only at BASF's Ludwigshafen Site.*, BASF (BASF, 1910), https://www.basf.com/global/en/who-we-are/history/responsibility/soil_water_air/environmental-protection.html

BASF made gradual improvements to emissions at the site. Ultimately, these improvements appear to have transferred towards factory workers as well purely by physical proximity in the name of employee retainment.

Furthermore is the increased representation of workers which could not be found in American company towns but can be seen in BASF. On one hand, Pullman Town ultimately reflected the wishes of its founder, George Pullman, who held a strong grip over the company and town. In San Bernardino, labour unions were formed out of a lack of representation for floor workers. Although Google has stellar employee benefits and perks, its operation as essentially a traditional management style has come under contention as well.²⁸⁶ On the other hand, German corporate law has historically ensured corporate codetermination between executives and employees in a two-tier board system. Within large companies, employee representatives must make up between a third and half of a supervisory board known as the Aufsichtsrat, which the management board (Vorstand) is answerable to.²⁸⁷ As such, codetermination has resulted in lower levels of inequality across the economy.²⁸⁸ On the other hand, American companies are typically concerned with shareholder interests only. Therefore, BASF receives a more balanced input between its executives, shareholders, and employees.²⁸⁹ In fact, BASF was hailed as ‘another pioneer of European worker representation’ when BASF SE signed an agreement on worker participation, upholding the two-tier management system.²⁹⁰ This appears to be a model of more responsible corporate governance in contrast to the US.

Compared to other cases in this paper, BASF commits itself to the region in other ways primarily with regards to BASF’s capability to respond to environmental improvement through technological innovation.

BASF appears to use architecture and local improvements to demonstrate its own state-of-the-art industrial

²⁸⁶ David A. Wise, “Google,” *Foreign Policy*, no. 154 (2006): 20–24; p.23.

²⁸⁷ Sophia Greene, “A Different Kind of Board,” *Corporate Knights* 16, no. 2 (Spring 2017): 34–35.

²⁸⁸ Green, “A Different Kind of Board.”

²⁸⁹ Ibid.

²⁹⁰ Norbert Kluge, “Workers’ Participation in BASF SE and the European Debate on Corporate Governance,” *Transfer: European Review of Labour and Research* 14, no. 1 (2008): 127–32, <https://doi.org/10.1177/102425890801400111>.

advancements. In 2004, it used its product, Neopor, in an eco-efficient house in Switzerland that could be exported as a model for Germany.²⁹¹ By 2014, the LuMit Centre was able to integrate local heating systems with a high share of renewable energy generated from BASF's sewage sludge incineration process, resulting in a building complex virtually free of emissions.²⁹² It was noted that companies such as Hoechst, Bayer and BASF at one point ceased to become passive targets of environmental regulations, but have come to cut back on emissions before any legislation has passed.²⁹³ For instance, BASF carried out a 34-year study to determine trends in Rhine fish populations, finding positive trends in fish diversity and abundance after BASF implemented a sewage treatment plant at Ludwigshafen in the 1970s.²⁹⁴ Even so, a common similarity that emerges is the relevance of image-making in BASF and other case studies. A strong sentiment of concern for the environment in the German political climate, perhaps most articulate in Germany's relationship with nuclear power, can be used to draw parallels to the chemical manufacturing industry. The Chernobyl incident left a long-lasting negative impression on Germans with regards to nuclear power. Coupled with Fukushima, Chancellor Angela Merkel ordered the closure of eight power plants in 2011, with a plan passed by German parliament to totally phase out nuclear power by 2022.²⁹⁵ Similarly, populations living along the Rhine have become more environmentally conscious since the 1970s, creating a public opinion climate where being portrayed as a polluter can impose heavy consequences on industry.²⁹⁶ BASF thus has a very strong incentive to portray itself otherwise—hence advertising itself as a cutting-edge, sustainable chemicals

²⁹¹ "BASF: Modern Energy-Saving Architecture; BASF's Neopor Foam Insulates Modern Passive Houses in Switzerland," ProQuest, August 13, 2014, <https://www.proquest.com/docview/445766433>.

²⁹² "BASF Mitarbeiterzentrum 'LuMit' in Ludwigshafen," *Detail Magazine* 54, no. 12 (2014): 1412–14.

²⁹³ Thomas Bernauer and Peter Moser, "Reducing Pollution of the River Rhine: The Influence of International Cooperation," *The Journal of Environment & Development* 5, no. 4 (1996): 389–415, <https://doi.org/10.1177/107049659600500402>, p.16.

²⁹⁴ Sascha Pawlowski et al., "34 Years of Investigation in the Rhine River at Ludwigshafen, Germany – Trends in Rhine Fish Populations," *Environmental Sciences Europe* 24, no. 1 (2012), <https://doi.org/10.1186/2190-4715-24-28>.

²⁹⁵ Markham Heid, "Why Ultra-Green Germany Turned Its Back on Nuclear Energy," Vox, July 19, 2023, <https://www.vox.com/future-perfect/2023/7/19/23799448/germany-climate-change-nuclear-power-fukushima-carbon-emissions-coal-global-warming>.

²⁹⁶ Bernauer and Moser, "Reducing Pollution of the River Rhine: The Influence of International Cooperation." p.17.

giant since the 1990s.²⁹⁷ In this sense, BASF practices corporate social responsibility using its own expertise, which is continuously motivated by fear of ostracization from public opinion, as well as an opportunity to refine its industrial processes in a win-win scenario. This suggests that public pressure may hold a strong influence on BASF's appeal. All in all, on one hand distributing executives and employees hierarchically and spatially closely appeared to be strongly influential in BASF's internal policies and infrastructure. On the other hand, public opinion drove BASF to invest in sustainable technologies to market itself as an environmental leader, using its chemical expertise to strive for more refined products and external infrastructure.

7. Overall Findings from All Case Studies

This study set out using neoliberal dystopian science fiction established by the likes of Neal Stephenson and William Gibson as a point of inspiration, imagining the corporation as a powerful entity with the ability to encroach upon liberties typically ensured by the nation-state. Where corporations acted to fill gaps left by the nation state through benefits and amenities, this culminated in the spatial phenomena known as company towns. The study scrutinised company towns to determine whether corporations provided services for employees out of a genuine concern for employee well-being, or disingenuous moves intended to meet the requirements of a functional, but juridically weakened state in both liberal and neoliberal economic periods.

The findings of this study were unexpected. Whereas the original intent of this study was to examine the effects of physical corporate infrastructure as an exercise in spatial planning, the inherent socioeconomic context behind all four case studies were nuanced and complicated, which resulted in an examination of how corporations establish control over employees through physical infrastructure. No company town is ever the

²⁹⁷ BASF, "Environmental Protection at the Ludwigshafen Site," Environmental Protection at the Ludwigshafen Site, accessed August 26, 2023, https://www.basf.com/global/en/who-we-are/history/responsibility/soil_water_air/environmental-protection.html

same, and neither are their motives for conception. However, all company towns were created to establish and exert control over employees in one way or another.

In Pullman, private property rights were instrumental in controlling and alienating employees, operating similar to a homeowners' association (HOA) but simultaneously allowing the Pullman Town to recoup costs by internalising employee spending through commercial and utility outlets, namely in renting flats. In San Bernardino, Amazon enjoyed large supplies of cheap labour, but never established physical infrastructure apart from logistical distribution centres. Control over San Bernardino labour was exerted through labour monopsony, where Amazon was virtually the best and biggest employer in town. At the same time, Amazon micromanaged its employees through digital surveillance, and unforgiving termination policies with the unspoken implication of expendability. Conversely, Google showered employees with benefits, perks, and amenities, in an effort to retain personnel at the workplace. Employees end up staying at the company overcontributing working hours to ensure the company's success. However, for a company that employed a considerable amount of people in Ludwigshafen, BASF appeared to encroach upon employees this least. While it had businesses outside chemical production, these ventures were relatively small-scale and rooted in historical origins. New, small-scale ventures that were established after state controls diminished nevertheless demonstrated that a company is capable of establishing employee benefits without overstepping its social responsibility. These variations in control can be attributed towards organisational differences. The most extreme case was Pullman Town, which was the manifestation of a utopia imagined and personally maintained by George Pullman, although Mr. Pullman had never lived in the town himself. Oppositely, German corporate law ensured that employees have a significantly large platform for corporate input through the *Aufsichtsrat*. Corporate representation amongst all levels has a positive influence in corporate decision-making, while a lack thereof puts employees in an exploitable position.

In all three American case studies, employees were viewed as vehicles for the company's maximal gain, whether through incentives or disincentives. Whether companies preferred incentives or disincentives differed via each workers' perceived value. On one end in Amazon's workforce, workers were cheap and plentiful in a transient environment. Their jobs were simple, and thus they were expendable. Amazon therefore opted for an explosive, but ultimately unsustainable use of workers. On the opposite end, the Googleplex was rated as America's best workplace for multiple years in a row with amazing benefits, recreational facilities and food. Nonetheless, this subtly coerced employees into an imbalanced work life, whereby the company itself provided the 'life' aspect to work-life balance, clearly overstepping its social responsibility. Therefore, depending on how much value employees appear to hold to the corporation, companies will invest as much as financially sustainable into their employees, as seen in studies of private sanitation services in company towns from the 1920s.

San Bernardino therefore emerges as a particularly problematic example of a company town. Amazon has been accused, with good reason, of creating a company town, and yet lacks all the services typical company towns provide. Instead, it views the city as what the journalist Noah Smith describes as a vast staging ground in order to serve more prosperous state counties.²⁹⁸ Hence, learnings from the case studies will be applied towards San Bernardino.

What often goes unnoticed in typical economic studies is an understanding of the relationship between physical proximity between executives and employees. In Ludwigshafen, both groups of workers were concentrated together at a site of pollution, which may have triggered the company to provide amenities and pollution measures to accommodate their executives. This resulted in ordinary workers benefiting from

²⁹⁸ Allison, "What Happens When Amazon Comes to Town? Environmental Impacts, Local Economies, and Resistance in Inland Southern California," p.178-179.

company services out of pure proximity. Amazon also provides plenty of benefits in Seattle, its new company town for executive and tech workers, but failed to do so in San Bernardino, which consisted of warehouse workers and lower level management. Therefore, company towns can only function successfully when stakeholders with considerable sway in the decision-making process avoid disassociation. For an equal decision-making process, forcing direct and indirect physical interactions between executives and employees avoids dissociation from one another and promotes workers to consider their real-life impact outside their job description.

Finally, an unexpected finding of this study was the high participation of all companies in aiming to control their image. This was susceptible to external influences, such as the environmental movement spurring air and water filtration measures along the Rhine River from the 1970s. Where company towns were planned, they were maximised by becoming inherent advertising outlets to entice potential employees. However, where towns were ‘takeover’, the company tended to emphasize benefit programmes instead to make up for a relative lack of physical facilities. Nonetheless, all four studies were extremely conscious about their public images, showing that public pressure can reform companies, although whether these reforms are disingenuous must be examined in closer detail.

8. Redesigning San Bernardino: Recommendations

It is clear that San Bernardino is the most lacking out of all four company towns because of multiple factors. The Amazon warehouse worker is disposable, is exposed to dangerous and intense labour conditions, and is at risk of losing employment in the long term from Amazon’s push to create ‘lights out facilities’.

The solution in the short term is to intensify local labour efforts that aim to overturn Amazon’s grip on the status quo. Labour organising by creating strikes and forcing company executives to come to the negotiating

table will create more equitable working conditions in the Inland Empire, from longer breaks to higher pay and less punishing digital surveillance techniques. This must be coupled with media coverage as well, which has the ability to persuade members of the public and corporate stakeholders to take action on San Bernardino. Without their support, local actors will continue to lack disposition against the logistics giant as San Bernardino consists of lower income residents as well as large amounts of undocumented immigrant workers which enjoy less protections.²⁹⁹ Last but not least, the economic injustice perpetuated by a strong top-down management system must be challenged. Union representatives must be afforded the right to a controlling stake within decision-making between warehouse managers, and possibly higher levels of management as part of self-advocacy.

In the long term, the Amazon worker must also either become more indispensable, whether by moving up the corporate ladder or diversifying their skill sets. However, both are difficult to achieve under conditions set by Amazon. Therefore, the City or State of California must step in to provide relief.

As Amazon currently enjoys a labour monopsony, its influence over the city must be dismantled by diversifying San Bernardino's career options. For instance, San Bernardino industries are mainly concentrated in auto or logistics businesses. However, when the city lacks geopolitical advantages apart from a strong logistical network, the direction that San Bernardino can take to improve itself are limited.

Although the city has only just overcome filing for bankruptcy in 2012, a promising avenue of opportunity would be to diversify the next generation's skill sets by promoting education.³⁰⁰ For instance, more San Bernardino students should be encouraged to go to university, rather than vocational colleges and high school pathway programmes that propagate a narrow set of industrial skills favourable to Amazon. However,

²⁹⁹ Wong, Interview with Professor Eric Nilsson.

³⁰⁰ Associated Press, "A Decade Later, San Bernardino's Bankruptcy Case Is Finally Closed," Los Angeles Times, September 13, 2022, <https://www.latimes.com/california/story/2022-09-13/san-bernardino-bankruptcy-case-closed-decade-later>.

San Bernardino itself is still a ‘good place to live to get somewhere else’. It lacks funding and geopolitical resources to be relevant to modern non-logistical businesses today. At present, the City could also increase taxes on Amazon to increase their revenue which would then be contributed towards educational funding, as well as other parts of city management. Even though this runs the risk of Amazon or other warehousing companies threatening to move their operations elsewhere, San Bernardino’s numerous distribution facilities, and its logistics-exclusive airport have become indispensable to Amazon’s operations.

In the scenario that San Bernardino cannot diversify its economic offerings, a radical suggestion emerges:

Could Amazon double down on corporate governance? In reality, Amazon is now deeply entrenched in San Bernardino due to its high amount of infrastructure in the area. It may be possible that San Bernardino and Amazon do not untangle from one another until the company folds. As such, San Bernardino may face an only option of embracing Amazon fully.

8.1 Spatial Intervention: Amazon City

It is understood that executives make decisions that benefit both themselves and employees when in the vicinity of the latter. What if Amazon created regional headquarters in San Bernardino? An expected surge in robotics being used to augment the Amazon warehouse would likely require skilled technicians to maintain and monitor. Currently, the automation process is limited to moving goods for pickers. A full ‘lights out’ facility would require research and development on a large scale. Figure 22 illustrates a vision where Amazon headquarters and warehouse are developed side by side.



Figure 22. *Quick Photoshop collage of a consolidated Amazon with regional headquarters and warehouses in the same location.*

In an area where land is cheap and close to the sites of real production, San Bernardino may need to find ways to attract Amazon's technology divisions to the city. For instance, attracting more visitors in general would need San Bernardino to divest itself from car culture, which involves creating a dense, walkable downtown core with upscale businesses to transform San Bernardino from a liminal space into a memorable place. In return, moving Amazon tech workers to San Bernardino would certainly boost finances for the city by allowing capital to flow into the area, rather than encouraging residents to leave and spend money elsewhere by commuting. On top of that, employees from different parts of the company would be able to understand their impacts on one another, which counters the dissociative effect experienced when executives are distanced from the sites of production and capital distribution. Nonetheless, this proposal is nothing short of a moonshot, given its distance from Los Angeles, San Bernardino's lack of offerings in terms of culture, business, or R&D. Therefore, If San Bernardino cannot double down and transform into Amazon's next tech hub, how can Amazon use technology beyond digital surveillance and automation?

8.2 Spatial Intervention in Amazon Warehouses

Amazon warehouses are heavily focused on the movement of physical goods, ignoring the needs of human workers who are alienated into being perceived by upper management as Taylorised automobiles. While warehouses have a canteen/break room, washrooms and a in-house injury centre, the extent to which Amazon accommodates its workers is minimal. At one point, the poor workplace culture at Amazon will need to be addressed. Its breakneck rate of growth and delivery times are unrealistic on an economy of scale that relies on a large, but finite number of workers who eventually burn out from working at the company. Massive warehouses mean that even walking to toilets makes workers lose a significant amount of time taken on break. Because the Amazon warehouse floor essentially acts as a corporate enclave since workers are within the distribution centre for the entire working day, one could view it as an enclave with much less amenities, compared to that of Google's or Pullman's. Amazon could provide more amenities throughout their facilities, such as closer bathrooms, snack bars, or small rest facilities for workers to recuperate shown in figure 23. This would save workers walking distance between facilities, and reduce stressful conditions found within the company. However, it has been observed that spatial solutions were more often than not, used as advertising stunts to cover up inherent systematic problems at hand. The effects spatial architecture has for the company can almost always be used to further corporate agendas. Therefore, spatial intervention in the Amazon warehouse cannot provide concrete social benefits for workers, namely working conditions.

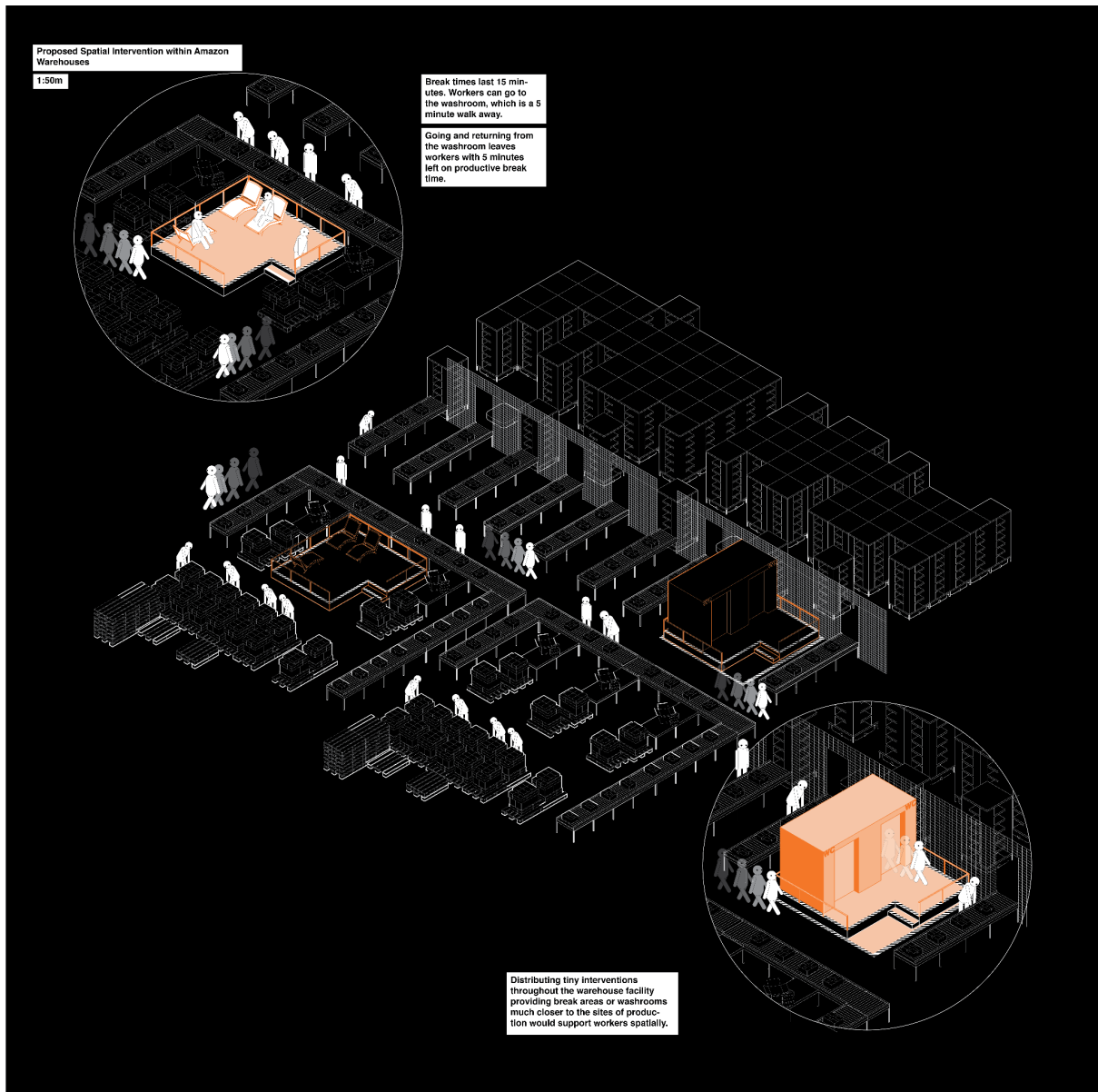


Figure 23. Axonometric drawing of two proposed micro-interventions in Amazon warehouses.

9. Final Remarks

The implications of this study are disturbing in the author's opinion. Companies were able to use their company towns, marketed as an attempt to introduce better work-life benefits for employees, as a subtle but concerted push to maximise productivity out of their workers. In this sense, companies eroded work-life balance by dictating how it was carried out. Over time, this study reflects a critical perspective of corporate practices, aligned with several aspects of Marxist theory, such as alienation, false consciousness, and

passionate work. While the author does not identify as being aligned with Marxism, company town models are still demonstrated as exploitative spatial phenomena which set different but equally harmful precedents for work culture standards across industries.

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