Factory of Lives
The Architecture of Company Towns in Biella

Serena Mazzetti

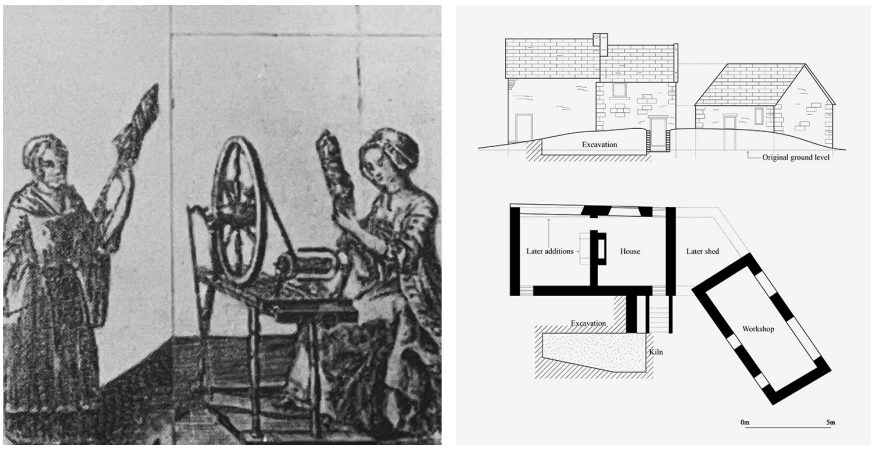
Houses in the Trossi company town.
Photograph by Simone Rossetti, from *Fondazione Archivio Sella*, early 1900s.

Company towns are complexes that merge living and working spaces into a coherent urban system. Throughout the eighteenth century, company towns arose as a novel architectural and urban phenomenon, consisting of workers' villages that encompassed not only workers' place of work, namely the factory itself, but also their homes and services like schools, stores, churches and social spaces.[1]

The notes that follow explore the driving forces behind company towns as *residential models of capitalist utopia*.[2] The company towns of Poma in Miagliano, of Trossi and Rivetti in Vigliano Biellese, and the one in Tollegno are used to give an overview of the evolution process of this *model* up to its peak of realization (ca. 1900);[3] by examining these case studies in Biella, we can explain the features of the company towns and the role played by domestic space. While previous textile activities relied on the family-business model, in which the boundaries between work and home were blurred since the domestic sphere also hosted their inhabitants' place of work,[4] company towns were based on the separation of public and private life.

Company towns provided an urban and social model, which hosted the factory on the one side and the new prototype of home on the other, in addition to several types of services. They were born out of the initiative of entrepreneurs as a response to the new workers' needs during the Industrial Revolution, and were aimed at social control.[5] The factory began to encompass every aspect of the workers' lives, from their birth, thanks to hospitals, to their death, with cemeteries.[6]

1 Renato De Fusco, *Company Town in Europe from the Sixteenth to the Twentieth Century*, Nuova Serie Di Architettura (Milan: Fr. Angeli, 2017), 7–9.
2 Roberto Gabetti, *Villaggi operai in Italia: la Val Padana e Crespi d'Adda*, Saggi 628 (Torino: Einaudi, 1981), 37.
3 Augusto Ciuffetti, *Casa e lavoro: dal paternalismo aziendale alle comunità globali: villaggi e quartieri operai in Italia tra Otto e Novecento*, (Strumenti & documenti, 2004), I–II.
4 See, for example, Adam Menuge, "Domesticated factories and industrialised houses: the buildings of the Northamptonshire boot and shoe industry," in *The Vernacular Workshop: From Craft to Industry, 1400–1900*, ed. P. S. Barnwell, Marilyn Palmer, and Malcolm Airs, (York: Council for British Archaeology, 2004), 123; and Colum Giles, "The Yorkshire textile loomshop: from weave's cottage to the factory", in *ibid.,* 75–81.
5 Augusto Ciuffetti, *Casa e lavoro: dal paternalismo aziendale alle comunità globali: villaggi e quartieri operai in Italia tra Otto e Novecento*, (Strumenti & documenti, 2004), I–II.
6 Roberto Gabetti, *Villaggi operai in Italia: la Pianura Padana e Crespi d'Adda*, Essays 628 (Turin: Einaudi, 1981), 38–42.



Left: Women working wool at home. From Ugo Mosca, *Lavoro, economia e finanza nel Biellese dalla metà dell'800 ai giorni nostri* (Gaglianico, Biella: Botalla editore, 2012), 153. Right: Drawing of a typical house in England circa 1679. Redrawn by the author from P. S. Barnwell, Marilyn Palmer, and Malcolm Airs, *The Vernacular Workshop: From Craft to Industry, 1400–1900*, (York: Council for British Archaeology, 2004), 34.

The philosophy behind the company towns was "to Provide and to Separate":[7] inhabitants were provided with all the necessary means to work and reproduce themselves and were kept separated from the rest of the population. Indeed, the private entrepreneurs who emerged with industrialization acted as benefactors by providing workers with a house and an improved standard of life, in return for their loyalty and productivity. However, this framework also led to what Vittorio Gregotti called "isolation," linked with the idea of the *campo, through the provision of specialized spatial domains, making possible the absolute standardization and minimization of humans' vital needs. Company towns bear witness to the transformation of social life into biological life, facilitating horizontal control and unconsciously preparing for the advent of global biopolitics*.[8]

THE ARCHITECTURE OF PATERNALISM: COMPANY TOWNS IN BIELLA

Technological and scientific progress together with physical and moral deterioration of workers' lives (resulting in alcoholism, factory absenteeism and social fomentation) characterized the Industrial Revolution.[9] In this context, architecture became an educational tool for the bourgeoisie who assumed a moral duty towards workers, guaranteeing them a longer-lived and therefore more productive life, far from the 'temptation' of joining the socialist movement.[10] This entrepreneurial philanthropism was based on an ideology known as *factory paternalism*, whose most complete and organic realization lies in the foundation of company towns.[11]

7 Expression extract from Vittorio Gregotti, *Company Town to Provide and To Separate an Open Letter to Giorgio Agamben,* (Rassegna 70), 1997. By incorporating an attitude of segregation and exclusion, he suggested that architects unintentionally echoed Agamben's spatial understanding of the concentration camp, anticipating biopolitical forms of control.

8 Ibid.

9 Cesare Piva, *I villaggi operai Trossi e Rivetti: un'analisi storico-architettonica* (Chioma di Berenice, 2000), 16; Elisabetta Carminati*, Il Movimento Operaio*, 2020, https://www.youtube.com/watch?v=OofMEkEimIk, Accessed on December 5, 2016.

10 Thesis by Vittoria Bazzan, Clara Crosa Galant, and Sandra Preacco, *I villaggi operai : la questione delle abitazioni in Europa e in Italia tra 800 e 900* (1996).

11 Augusto Ciuffetti, *Casa e lavoro: dal paternalismo aziendale alle comunità globali: villaggi e quartieri operai in Italia tra Otto e Novecento*, (Strumenti & documenti, 2004), I–II.

Left: The city of Biella as seen from the funicular railway,
by Simone Rossetti, from *Fondazione Archivio Sella*, early 1900s.
Right: Map of Biella depicting the historic center and the three *company town* case studies, drawn by the author. The historic center of Biella is highlighted in pink; the map also indicates the railway (shown as a dashed line), topography, rivers, and the locations of the three company towns case studies in red.

Often located in rural areas where the costs were reduced, company towns appeared as rigid models with specific characteristics: they were autonomous microcosms, often enclosed by walls and far from the cities, and they featured a strictly functional urban organisation, discouraging spaces for social aggregation.[12] This control extended beyond the workplace into workers' private lives, enforcing a strict division of gender roles,so that even education was controlled, as teachers were chosen and paid by the entrepreneurs themselves.[13] The worker's home became a form of blackmail in the case of ambiguous behavior, as its rent was directly deducted from wages.[14] Abriani describes home as "*possibly single-family, but also double,[…] with a productive vegetable-garden. […] Tending toward rural architecture, its role is to enable a family to be fed, (thus to maintain low wages); to foster a "healthy and moral life"; to create a sense of ownership; to stabilize labor; and to disseminate worker concentrations to prevent the outbreak of social conflicts."*[15]

The phenomenon just described developed in Italy, although more slowly than in the rest of Europe.[16] However, Biella, known as "city of a hundred smokestacks" or "the Italian Manchester," excelled industrially,

12 Cesare Piva, *I villaggi operai Trossi e Rivetti: un'analisi storico-architettonica*, 22.
13 Roberto Gabetti, *Villaggi operai in Italia: la Pianura Padana e Crespi d'Adda*, Essays 628 (Turin: Einaudi, 1981), 38-42; Augusto Ciuffetti, *Casa e lavoro: dal paternalismo aziendale alle comunità globali: villaggi e quartieri operai in Italia tra Otto e Novecento*, 37.
14 Thesis by Vittoria Bazzan, Clara Crosa Galant, Sandra Preacco, *I villaggi operai : la questione delle abitazioni in Europa e in Italia tra 800 e 900.*
15 Alberto Abriani as quoted in Roberto Gabetti, *Villaggi operai in Italia: la Pianura Padana e Crespi d'Adda*, Essays 628 (Turin: Einaudi, 1981), 45. Translation by the author, original text in Italian.
16 Alberto Abriani, *Patrimonio Edilizio Esistente: Un Passato e Un Futuro: Rassegna Di Studi, Progetti e Realizzazioni Nel Campo Del Recupero Edilizio in Piemonte e in Alcune Regioni Italiane Ed Estere* (Designers Riuniti, 1980), 125.

despite being among the smallest provinces in all of Piedmont.[17] In the middle of the nineteenth century, Biella was the poorest province in the state of Savoy in terms of agricultural production.[18] Nevertheless, it had a rich historical background in the textile tradition, especially as concerns hemp and wool, because this area had abundant water resources, with less mineral content, allowing the production of emulsions needed for washing and cleaning cloth with fewer soaps and chemical additives. Another crucial reason for Biella's industrial development was, as pointed out by Quintino Sella, its inhabitants, characterized by a strong work ethic, perseverance, frugality, and a fearless spirit in their undertakings.[19] Furthermore, important families, such as the Sella family (founders of the Sella bank), also contributed to financing these paternalistic projects, following the wave of major European industrial models, which were imported into Biella by many entrepreneurs after their travels.[20]

Due to limited space, I've chosen three of the most significant company towns in Biella for analysis and will use them to extrapolate more general insights about the evolutionary process of paternalism.[21]

A MORE CONVENIENT PLACE: POMA COMPANY TOWN, MIGLIANO, 1870

The Poma company town was the third-smallest municipality in the entire country. The Poma brothers founded the Cotonificio F.lli Poma di Miagliano, one of the biggest cotton factories in Italy, along the Cervo stream. Infrastructure was built first due to the high demand for raw materials: communication roads, a railway station, and an "S" bridge that is still considered a pioneering technology of those times that were completed in 1919.[22] Despite this ground-breaking intervention, Poma entrepreneurs realized that the very heart of the factory lived in the 2,150 workers, hence the need to establish homes and services for them.[23]

Moreover, a cemetery originally occupied the entrance to the village, but it was relocated, so that the main entrance could be designed to skirt the entire side of the factory-which flows into a public square, in order to strategically boost its magnificence. From this square, the road on the right heads toward the factory, while the one on the left runs to the villa, situated on top of the hill ensuring an overview of the village. Every Sunday, the villa's park was open, so that the workers' families could enjoy walking under their masters' supervision. Throughout the week, the rhythm of the entire village was dictated by the factory's bells, whereas on Sundays it was marked by the church's bells. Descending back to the square from the hill, there were the three villas of the founders' sons, followed by the factory, thus demonstrating a meticulous study of an urban design endowed with a strong symbolic connotation.[24]

17 Piero Sraffa Isituto Tecnico Commerciale, *Dalla famiglia alla fabbrica : aspetti dell'industrializzazione nel Biellese*, (Program Socrates; Comenius Azione 1, 1997), 11.

18 Alberto Abriani, *Patrimonio Edilizio Esistente: Un Passato e Un Futuro: Rassegna Di Studi, Progetti e Realizzazioni Nel Campo Del Recupero Edilizio in Piemonte e in Alcune Regioni Italiane Ed Estere* (Designers Riuniti, 1980), 125.

19 Piero Sraffa Isituto Tecnico Commerciale, *Dalla famiglia alla fabbrica: aspetti dell'industrializzazione nel Biellese*, (Program Socrates; Comenius Azione 1, 1997), 28. Quintino Sella was an Italian scientist, politician, and mountaineer; he supported the founding of the Banca Sella of Biella, established in 1869, where his brother, Giuseppe Venanzio Sella, served as the first president.

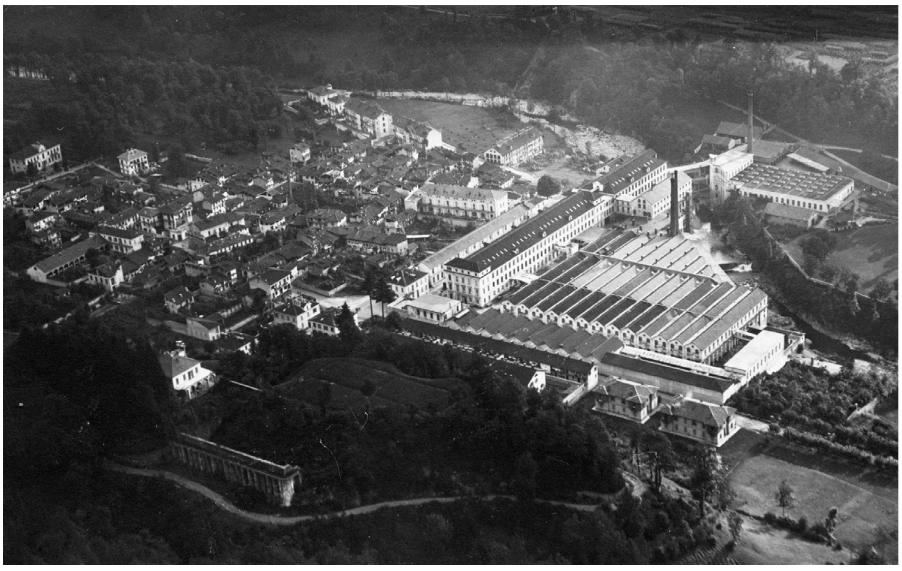
20 Ibid.

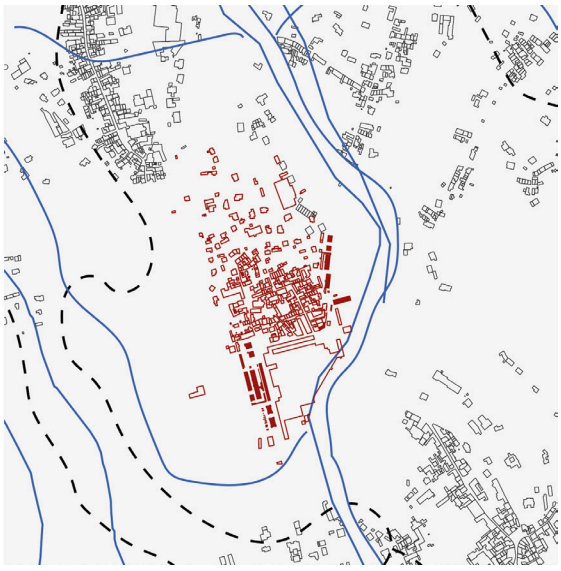
21 Alberto Abriani, *Patrimonio Edilizio Esistente: Un Passato e Un Futuro: Rassegna Di Studi, Progetti e Realizzazioni Nel Campo Del Recupero Edilizio in Piemonte e in Alcune Regioni Italiane Ed Estere*, 127.

22 Alessia Stivala, *Una Casa a Ognuno I Villaggi Operai: Dal Socialismo Utopico al Paternalismo Industriale. Il Villaggio Operaio Poma a Miagliano* (Master's Thesis in Architecture for the Restoration and Enhancement of Heritage, Polytechnic University of Turin College of Architecture Department of Architecture and Design, 2013–2014), 62

23 Fratelli Poma, *Manufacture de Coton Fratelli Poma Fu Pietro. Établissements & Institutions Ouvrières* (Turin, 1900), from Archivi Biellesi, *Villaggio operaio F.lli Poma*.

24 Information extracted from the interview by author with Davide Varesano, resident of Poma Miagliano company town, December 9, 2023.





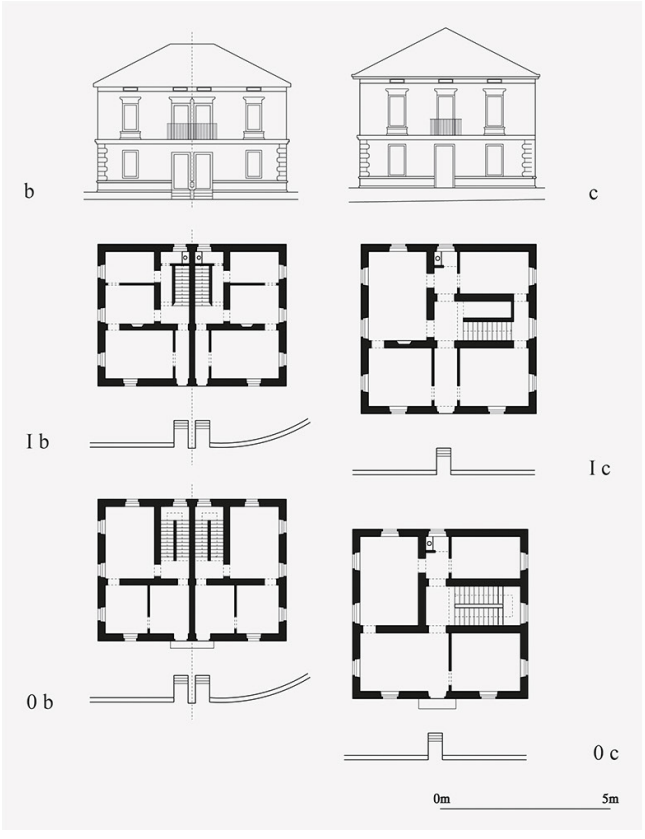
Left: Aerial photograph of Cotonificio Poma's "S" bridge,
by Simone Rossetti, from *Fondazione Archivio Sella*, early 1900.
Right: Poma company town plan highlighting the main workers houses in black,
drawn by the author.

Left: Villa of the Poma family on the hill, by author, 2024
Right: Three cottages of the Poma sons and the Poma Cotton Mill coming down the hill
on which the masters' villa was built,
by Simone Rossetti, from *Fondazione Archivio Sella*, early 1900s

Between the main workers' houses, the first two analyzed were adapted to the new requirements from pre-existing buildings, as suggested by their respective names: Case delle scuderie (Stable Houses) and Casa stendissaggio (Drying House). In the first case, this building with three floors had a load-bearing masonry structure that consisted of eight total dwellings, each with two rooms, a kitchen, and a bedroom. Access was guaranteed by a common staircase with only two toilets per floor. The north side was reserved for a boarding school for unmarried girls arriving from the regions of Friuli and Veneto,[25] which was managed by nuns and provided with a separate entrance to avoid ambiguous aggregations. In the courtyard, low buildings contained latrines, showers, and wood storage.

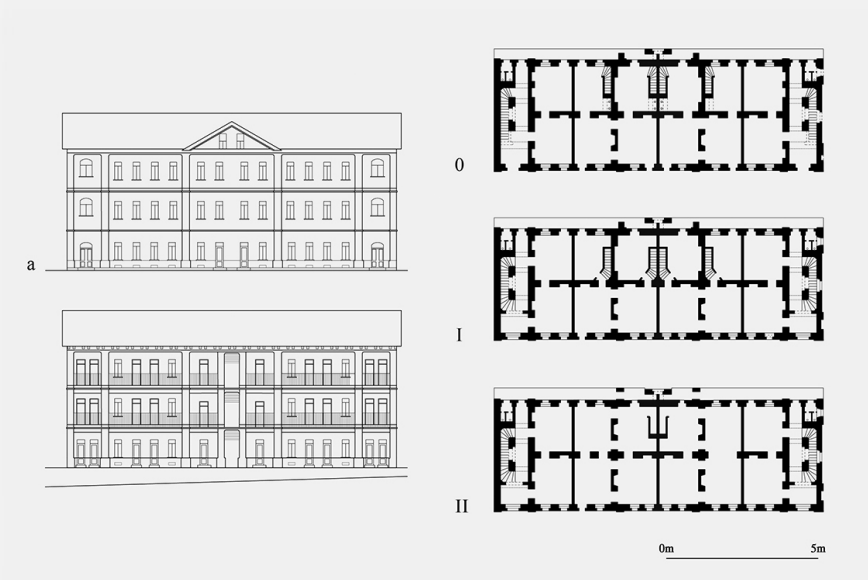
25 Alberto Abriani, *Patrimonio Edilizio Esistente: Un Passato e Un Futuro: Rassegna Di Studi, Progetti e Realizzazioni Nel Campo Del Recupero Edilizio in Piemonte e in Alcune Regioni Italiane Ed Estere* (Designers Riuniti, 1980), 129–132.

In the second building, each ground-floor accommodation had two rooms connected to an upper level by an interior staircase, while, on the third floor, the accommodations had one or two rooms maximum, facing a balcony structure onto which four public toilets per floor also opened, symmetrically positioned on either side of the common stairs. Each dwelling was additionally allocated a portion of orchard. On the same street, Via Poma, alongside the Cervo ditch, we find the Case della Gera, whose meaning in Biellese dialect (Gravel Houses) refers to their proximity to the stream. These were new buildings for the company's employees, with four stories above ground. There were twelve lodgings per building, ranging from two to four rooms each. Toilets were arranged outside, two per floor. Moving on the same street, there were two villas for families of factory directors, both enclosed by a wall with a palm garden within.[26] These had cellars, attics, stairways, and indoor toilets. Thus, one can see an apparent policy of social peace that was at the heart of company towns although, along the same street, there were homes that reflected the belonging to different social classes such that typological decisions, decoration, indoor versus outdoor bathrooms, vegetable gardens or exotic yards, and independent or communal entrances were differentiators of status and clearly expressed the occupant's position within the factory's social and professional hierarchy.



Left: Facade and plans of the managers' villas (b, c). Adapted from Alberto Abriani, *Patrimonio Edilizio Esistente: Un Passato e Un Futuro: Rassegna Di Studi, Progetti e Realizzazioni Nel Campo Del Recupero Edilizio in Piemonte e in Alcune Regioni Italiane Ed Estere* (Designers Riuniti, 1980), 131. Drawn by the author. Right: The two managers' villas on Poma Street. Photograph from Alessia Stivala, *Una Casa a Ognuno I Villaggi Operai: Dal Socialismo Utopico al Paternalismo Industriale. Il Villaggio Operaio Poma a Miagliano* (Master's Thesis in Architecture for the Restoration and Enhancement of Heritage, Polytechnic University of Turin College of Architecture Department of Architecture and Design, 2013–2014), 77.

26 Interview with Davide Varesano, December 9, 2023.



Top: Drawings of the Case della Gera (a) and directors' villas (b, c), drawn by author, adapted from Alberto Abriani, *Patrimonio Edilizio Esistente: Un Passato e Un Futuro: Rassegna Di Studi, Progetti e Realizzazioni Nel Campo Del Recupero Edilizio in Piemonte e in Alcune Regioni Italiane Ed Estere* (Designers Riuniti, 1980), 131. Bottom: Washerwomen at work in front of the "Gera houses" and at the background the two managers' villas on Poma Street,, from *RetiarchiviBiellesi* historical archives, 1930.

The workers' well-being was ensured through the following measures: first, rents, more convenient than in the city, were deducted directly from their wages for a price that varied according to size and number of rooms.[27] Second, a controlled diet was provided by the *Cucine Economiche* (Economic Kitchens) for those commuting and by a Food Cooperative Society for residents; to use the Economic Kitchen it was necessary to ask the masters for tokens, which would be deducted from wages. Strict regulations prohibited drinking and prevented those previously expelled for negligence from entry. The kitchen operated during vacations for lunch and was overseen by a chef hired by the entrepreneurs. Besides these kitchens, there were two others workers' houses. Moreover, in 1874, a kindergarten for

27 Alberto Abriani, *Patrimonio Edilizio Esistente: Un Passato e Un Futuro: Rassegna Di Studi, Progetti e Realizzazioni Nel Campo Del Recupero Edilizio in Piemonte e in Alcune Regioni Italiane Ed Estere* (Designers Riuniti, 1980), 132.

150 workers' children was established, run by nuns and equipped with modern furniture, including a breastfeeding room, a necessity for which female workers were guaranteed time off work. Not surprisingly, next to the kindergarten, a sewing school was established for women only. There were even an elementary school and a washhouse, the real "court" of the village, as it served as a social gathering place for women. Healthcare was prioritized thanks to the presence of a doctor and an infirmary provided by the Poma brothers to address workers' needs and monitor factory absenteeism. For leisure, men could go to the Circolo Stella, a bar offering male-only entertainment, although to discourage alcoholism and to encourage financial prudence a box to deposit a portion of the workers' wages was created.[28]

SOCIAL ORDER: TROSSI AND RIVETTI COMPANY TOWN, VIGLIANO 1919–1924

The second case study presents some features in common with the previous case. It was located in Vigliano, again near water sources where low costs of construction and labor were assured. Here, in 1882, Agostinetti, one of the founders of the Tollegno Spinning Factory, established a two-story factory for washing, carbonizing, and slabbing wool for third parties.[29] After Agostinetti's death, Trossi added wool raying and dyeing operations, also worsting it for third-party processing. Then, World War I brought significant growth to textile companies, especially in Biella, where the industries supplied 70 percent of the Italian army's cloth and flannel needs. Trossi, seeking independence, persuaded the Rivetti family to acquire shares in Pettinatura Italiana Limited, co-founded by Trossi and Hill in 1905. This led to the establishment of the Pettinatura factory in 1906, which employed laborers from Friuli and Veneto, who were escaping from the Austrian invasion following the Battle of Caporetto and from the flooded Polesine.[30]

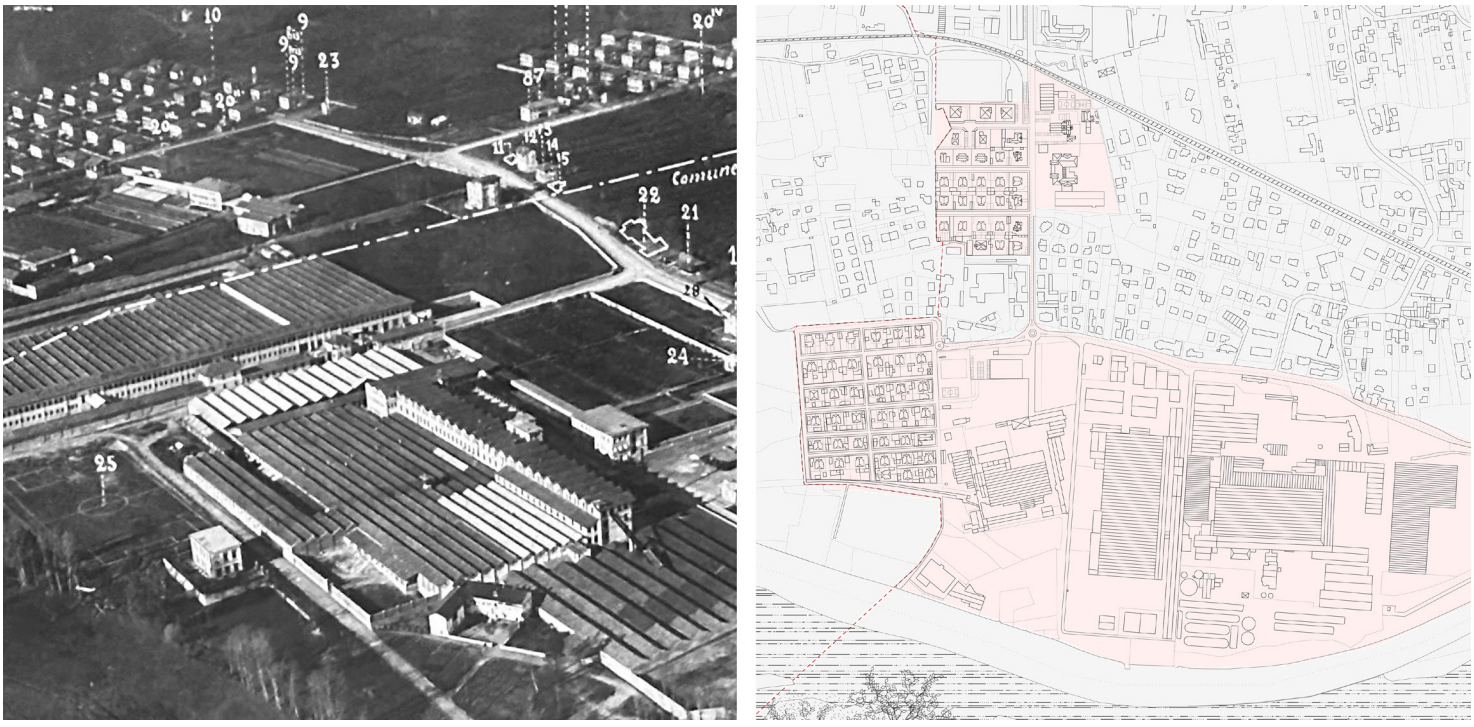
In this context, the demand for housing rose, and so Trossi founded the village near the Pettina factory in 1919, followed by Rivetti's village in 1921, next to the relatively new spinning factory. These villages presented a rectangular layout surrounded by countryside, featuring multi-family villas inspired by the worker village in Mulhouse, with electricity, running water, and a required vegetable garden. It resulted in an orthogonal grid given by the intersection of exclusively distributive roads. The main road, Via Quintino Sella, connected all the services and the two villages to the factory, creating an inverted "T" where the house of the head clerk is positioned at the intersection, ensuring an overview of the workers directed to the factories.[31] A total of sixty buildings were constructed, thirty-nine for the Trossi village and twenty-one for the Rivetti village, all sharing a uniformity in volume, shape, and material, with minor decorative differences reflecting "social competition," as they reflected not only the worker's role within the factory, but also his social position and importance within the community.

28 Alessia Stivala, *Una casa a ognuno I villaggi operai*, 89–90.

29 Cesare Piva, *I villaggi operai Trossi e Rivetti: un'analisi storico-architettonica* (Chioma di Berenice, 2000), 24–25.

30 Franco Macchieraldo, *La Pettina, la storia, le genti: la vicenda industriale della Pettinatura Italiana di Vigliano* (Gaglianico, Biella: Bottalla, 2018), 9–37.

31 Informations extracted from the interview made by the author with Franco Macchieraldo, whose father worked at the Pettina of Vigliano, January 5, 2024. The Mulhouse company towns (founded in 1853, France) provided for the first time the "pavillon" or "mulhousienne" model house, which was a single or two-family villa with separate entrances, raised floors, and private gardens, ensuring hygienic standards and functional separation while facilitating social control. The Mulhouse model was promoted as an ideal prototype in the 1867 at the Universal Exposition of Paris.

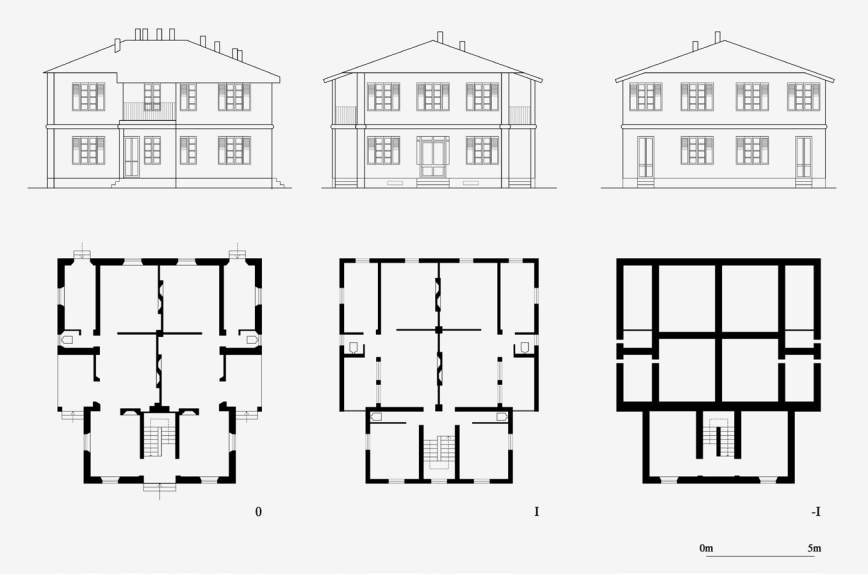


Left: Aerial photograph of the Vigliano company town, by Simone Rossetti, from *Retiarchivi Biellesi* historical archives, 1930.
Right: Site plan of Trossi and Rivetti company towns, drawn by the author

The Trossi company town featured three housing types: there were thirty-five type A houses, three type B houses, and one type C houses. The first type was composed of two floors and a T-shaped plan with two dwellings per floor. On the ground floor, the entrances were on the sides, separate, and private, while the access to the upper floor was via a common central stairwell. Each accommodation had a kitchen, two rooms, a garden, and a latrine ventilated through a window for a total area of 54 m^2 and a height of 3.30 m. Type B presented a Greek-cross plan of 50 m2 and consisted of two duplex apartments, each with its own entrance. On the ground floor, there was an entrance hall, a kitchen illuminated by a triforium, and a staircase that extended to the upper floor. Here, there were two rooms, both illuminated by windows, followed by an air-conditioned lavatory. A porch in the rear of the residence was utilized for storage. Finally, type C, of 50 m2, was a one-story dwelling that featured three symmetrical accommodations within it, each with a separate entrance; these offered a kitchen and two rooms with direct access to the garden. On the porch, obtained by subtraction of a portion, were two latrines, thus resulting the most austere type of house, as it lacked verandas, balconies, interior latrines and exterior decorations.

In the Rivetti company town, there were also homes of types D and E. They both were two-story dwellings, providing two accommodations per floor, each with its own kitchen, two rooms, and internal latrines: very economical and abundantly illuminated. They had a more articulated floor plan and a more elegant architectural language characterized by the presence of bow-windows. In type E the bow-windows were developed on the two floors, while in type D those on the ground floor became terraces on the first floor.[32]

32 Cesare Piva, *I villaggi operai Trossi e Rivetti: un'analisi storico-architettonica* (Chioma di Berenice, 2000), 33–41.



Plans and facades of Type A.

Plans and facades of Type B, drawn by the author from Cesare Piva, *I villaggi operai Trossi e Rivetti: un'analisi storico-architettonica* (Chioma di Berenice, 2000), 96.

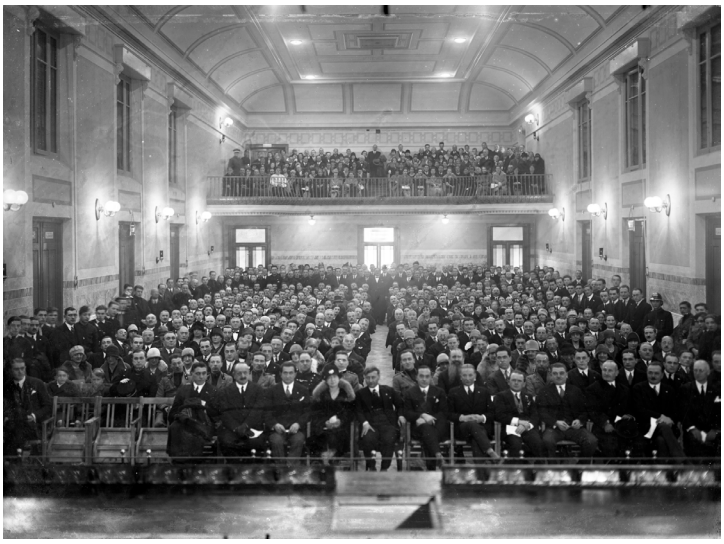
From long interviews with the few inhabitants still alive today, it emerged that there was a cafeteria with two separate entrances, one for workers and one for clerks, offering different meal options. Factory workers received one meal daily, while office workers enjoyed two different meals.[33] Moreover, the consumer cooperative provided fresh and local goods at half price, for those who behaved well, through a low-cost subscription.[34] In 1923, the ERIOS (Ermanno Rivetti Instituto Opere Sociali) was established in Rivetti Village, providing leisure facilities such as bars, pool tables, reading rooms, and boules courts, mainly for men's free time. Moreover, the company organized fully funded sports teams and hiking tours. The Aurora Club, attended by female workers, offered sewing and home economics classes to combat malnutrition, inside the new domestic private kitchen.[35] In 1927, a cinema-theater was opened with a 400-seat capacity, equipped with heating and performer amenities.[36] Employees'

33 Interviews were conducted by the author of this essay on December 10, 2023. Interviewees also included some of the few living workers that resided within the company towns. Their names are Detomati Ezio, Cavicchioli Gigliola, and Simonetta Biagetti.

34 Franco Macchieraldo, *La Pettina, la storia, le genti: la vicenda industriale della Pettinatura Italiana di Vigliano* (Gaglianico, Biella: Bottalla, 2018),104–5.

35 Interview by the author with Detomati Ezio and Cavicchioli Gigliola, a married couple who lived in the company town of Vigliano and worked in the Pettina factory, December 10, 2023.

36 Franco Macchieraldo, 103.



ERIOS and the cinema-theatre, both primarily attended by men.

The kindergarten and the summer school for children.

The cafeteria and the communal kitchen for workers, by Simone Rossetti,
from *Fondazione Archivio Sella*, early 1900s

children also benefitted from a kindergarten and a summer school. The entrepreneurs also brought gifts for children during festivities, reflecting a strong commitment to the community's welfare.[37] Social stability was maintained through various measures: the entrepreneurs recruited trustworthy staff for the leisure centers, so that they could supervise the workers' private sphere, especially regarding the consumption of alcohol. A kind of "social competition" was fostered by prizes, for the "best kept" garden or for basic goals, such as marriage.[38] As recounted by Cavicchioli Gigliola: *"[…] There were concessions, they whitewashed all the houses every year and helped with all various work to be done on the houses. It was a supportive community."*[39] Furthermore, the presence of the Carabinieri, whose house was purposely positioned at the entrance of Rivetti village, reinforced the importance of social order also employing random checks on the employees' bags on their way out of the factory.[40]

Church of St. Giuseppe in Rivetti village,
by Simone Rossetti, from *Fondazione Archivio Sella*, early 1900s.

In contrast to the Trossi village, the Filatura Rivetti required specialized labor, preferably female, which resulted in an increasing number of unmarried girls, thus requiring the establishment of a boarding school supervised by nuns following extremely stringent regulations.

Finally, the presence of the church of St. Giuseppe, named after the only master remaining at that time, Giuseppe Rivetti, was not coincidental, reflecting a divine connotation of the whole system.[41]

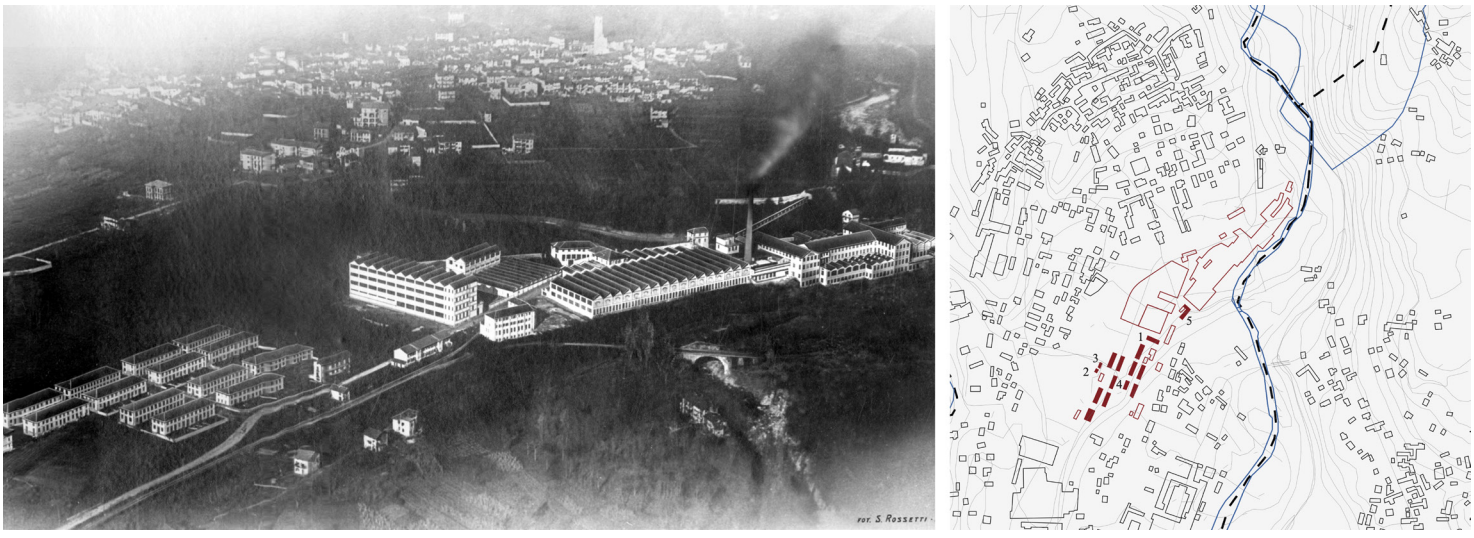
A COMMUNITY, NONETHELESS: THE FILATURA OF TOLLEGNO, 1920–1925

Even the final case study presents similar characteristics, in terms of its strategic location and its urban and social model design. In 1861, Maurizio Sella established, also thanks to the contributions of notable entre-

37 Interview by the author with Bighetti Simonetta, who lived in the company town of Vigliano for her entire life, December 10, 2023.
38 Interview with Detomati Ezio and Cavicchioli Gigliola.
39 Interview with Detomati Ezio and Cavicchioli Gigliola. Translation by the author, original text in Italian.
40 Franco Macchieraldo, 102–4; Interview by the author with Franco Macchieraldo, whose father worked at the Pettina factory of Vigliano, January 5, 2024.
41 Cesare Piva, *I villaggi operai Trossi e Rivetti: un'analisi storico-architettonica* (Chioma di Berenice, 2000), 72–74.

preneurs such as Rosazza, Agostino Agostinetti, and Virginio Ferrua, [42] a spinning mill in Tollegno that soon became the Filatura di Tollegno in 1900, which employed up to 2,000 workers.

As in the abovementioned cases, there were all sorts of facilities, tying the workers' lives to the workplace and ensuring a rigid gender division; for instance, bars were considered gathering places for men, whereas laundry spaces or sewing and cooking schools were meeting places exclusively for women. As Luigi Ghiardo mentioned when interviewed: *"In those times, there were public showers where once a week you could go to wash yourself, male and female, […] usually on Saturdays. There was also a room where we went to watch television. I remember that usually in the summer we bought popsicles to watch TV, they cost 25 lire."*[43]



Left: Tollegno company town,
by Simone Rossetti, from *Fondazione Archivio Sella*, early 1900s.
Right: Plan of Tollegno company town, drawn by the author. 1. Afterwork sport club; 2. Showers; 3. Common laundry; 4. Workers homes; 5. Food store.

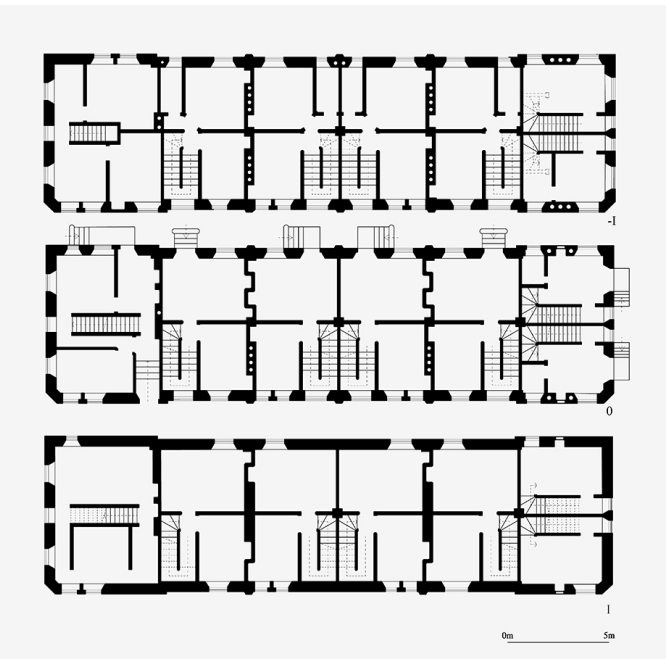
The village consisted of sixteen buildings, eleven of which were residential. Each house presented a separate entrance and a vegetable garden, distributed along four parallel streets. There were in total twenty-four rooms per building arranged across two floors. Another house called the "Magician's House" consisted of two stories above ground, comprising eight lodgings per floor, each consisting of three rooms plus a tiny latrine. Moreover, there was another home with four units, still in the form of the barracks typology, since it was the first to be built in 1908 by Agostinetti & Ferrua for its employees before being passed over to the Tollegno Spinning Mill in 1945.[44]

To better understand the overall atmosphere that surrounded the company town, it is sufficient to recall Luigi Ghiardo's memories of the place: *"The managers' perceptions also varied; some were esteemed and respected, while others were viewed with suspicion. I remember that Mr. Schneider had a good reputation: he visited the village regularly, especially during the Christmas holidays. It was a special moment when he came to say hello door to door, at every office, to give his best*

42 Thesis by Alessia Stivala, 118–24.

43 Interview by the author with Luigi Ghiardo, who lived in the Filatura di Tollegno company town, January 5, 2024. Translation by the author, original text in Italian.

44 Alberto Abriani, *Patrimonio Edilizio Esistente: Un Passato e Un Futuro: Rassegna Di Studi, Progetti e Realizzazioni Nel Campo Del Recupero Edilizio in Piemonte e in Alcune Regioni Italiane Ed Estere* (Designers Riuniti, 1980), 134–35.



Left: Homes in Tollegno company town,
by Simone Rossetti, from *Fondazione Archivio Sella*, early 1900s.
Right: Plans of the homes in Tollegno company town, drawn by author, adapted from Alberto Abriani, *Patrimonio Edilizio Esistente: Un Passato e Un Futuro: Rassegna Di Studi, Progetti e Realizzazioni Nel Campo Del Recupero Edilizio in Piemonte e in Alcune Regioni Italiane Ed Estere* (Designers Riuniti, 1980), 150.

Left: Consumer cooperative.
Right: Women with children in Company Tow's kindergarten in Tollegno,
by Simone Rossetti, from *Fondazione Archivio Sella*, early 1900.

wishes. He also gave gifts to employees, demonstrating a certain interest and attention towards the workers. […] People could walk freely in the streets with children, and there was a feeling of community and togetherness. Today it seems that this has changed, with less space for spontaneous solidarity."[45]

FROM COMPANY TOWN TO THE TOTAL FACTORY

In conclusion, company towns were founded upon contradictions: while emerging as symbols of progress, they also reiterated the necessity of remaining rooted in the peasant way of life to prevent workers from leaving their land. This duality was expressed by a primitive architecture, marked by the absence of corridors within the houses, preferring rooms in enfilade, but presenting exterior ornament that reinterpreted certain classical elements.[46] It was clear how the architecture, aside from its low-cost typology, aimed at morally and materially elevating the condition of workers through a daily contact with the bourgeoisie, in order to *aristocratize* them.[47] In this context, two aspects of Tafuri's critique of modern architecture become fundamental: first, the awareness that the form of architecture is marginal compared to its functionality, anticipating what he would call the "Crisis of the Form";[48] secondly, we see a secularized use of classicism that was once linked to Christianity, but later used as a symbol of exercised power.

However, even more important are the differences that arose in these three main case studies, a reflection of the evolution of paternalism previously discussed in the thesis. As the diagram shows, we speak of three evolutionary phases, which brought with them a shift in values and new industrial and housing typologies, influencing the conception of "city" toward the new millennium. It begins with a first phase, between 1860 and 1900, coinciding with the establishment of this ideology. During this time the vertical factory was born. In the second phase, paternalism reached its most organic realization, from 1900 to 1930, with the arrival of the horizontally structured firm, until its decline and total failure after 1930. The Factory becomes 'total' and the company towns are transformed into working-class neighborhoods, perfectly embedded in the urban context, as will be analyzed later.[49] This evolution is reflected in residential typologies. While we already see important social innovations in Miagliano, the workers' houses still represent that "barracks" or gallery style, which still allows a certain degree of community and less privacy. What also needs to be mentioned is the presence of a public square, an element banished from any other self-respecting company town. With the construction of the village in Tollegno and, even moreso in Vigliano, there was a gradual move toward making the dwellings always more independent, according to a pattern of increasing individualization and separation, echoing Agamben's field idea of provision and separation already mentioned. Barracks houses are transformed into villas, juxtaposed and adjacent to one another in Tollegno, into the Mulhouse model of Vigliano, eliminating any space of aggregation and using the wall to divide each private property from the other.

Although crucial in the first decades of the twentieth century, the company-town model was destined to fail, since it was unable to adapt to the changing needs of society. As technologies and energy sources advanced,

45 Interview with with Luigi Ghiardo. Translation by the author, original text in Italian.
46 Cesare Piva, *I villaggi operai Trossi e Rivetti: un'analisi storico-architettonica* (Chioma di Berenice, 2000), 36.
47 Roberto Gabetti, *Villaggi operai in Italia: la Pianura Padana e Crespi d'Adda*, Essays 628 (Turin: Einaudi, 1981), 40.
48 Theodora Giovanazzi, "Poverty and Architecture the Fuggerei as an Early Example of Affordable Housing," *Burning Farm* (October 10, 2023): 16.
49 Augusto Ciuffetti, *Casa e lavoro: dal paternalismo aziendale alle comunità globali: villaggi e quartieri operai in Italia tra Otto e Novecento* (Strumenti & documenti, 2004), I–II.

some of the localizing and conceptual factors that gave rise to company towns become obsolete. It was a model with very high startup costs and, becoming unnecessary, drove their respective masters to economic ruin. Nevertheless, they still left an indelible mark on modern society. Indeed, from here on there was to be no turning back until the total exaltation of the factory swept over the entirety of society.

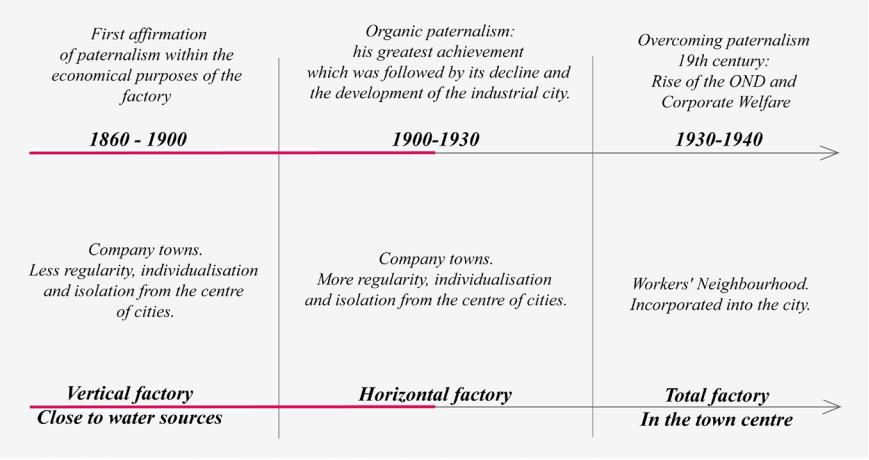


Diagram of the three different phases of corporate Paternalism in Italy corresponding to the three different phases of urban development of industrial cities.

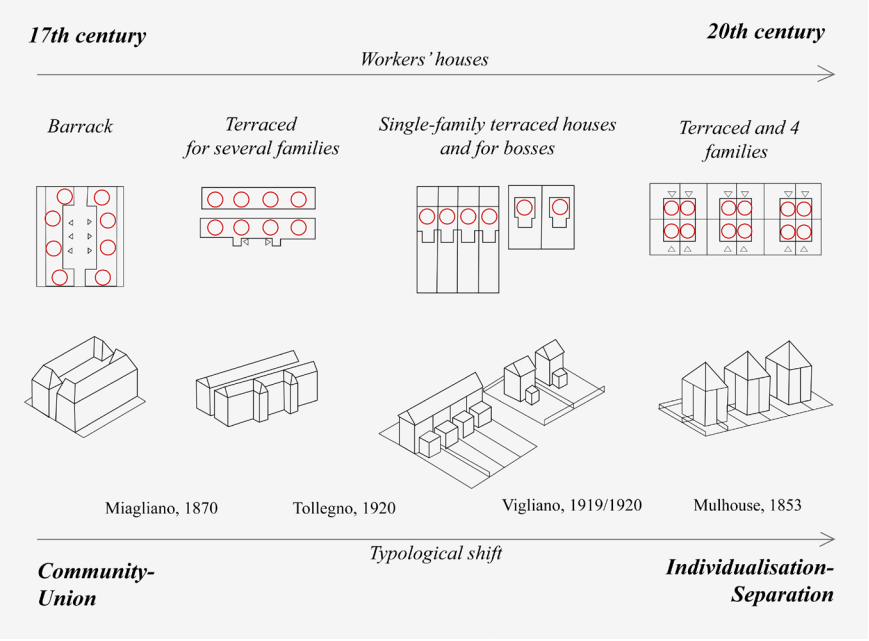


Diagram of the evolution of workers' homes typologies, drawn by author, adapted from Alberto Abriani, *I villaggi operai dell'Italia settentrionale come modello di insediamento*, in: "Atti" del II seminario LAU, (Gargnano, October 1975).

It can be said that company towns symbolize an intermediate stage, a temporary transition from a *laissez-faire* political system to the "total factory" elucidated by Mario Tronti in his publication *Workers and Capital*.[50] The former would always result in an unfavorable consequence, given that capitalism itself emerges from the clash of two unique and contradictory class identities and the subsequent exploitation of one of them; therefore, it is therefore crucial to implement a check that restricts the revolution. The

50 Mario Tronti, *Workers and Capital*, trans. David Broder (London and New York: Verso, 2019).

very disorder of the city is the outcome of a permanent state of war that is necessary for capital to control and force its subordinates to work. The persistent menace of the labor force rebelling against its own detrimental potion was, on the one hand, an element that needed to be eliminated and, on the other, a mechanism that capitalist development could exploit to its benefit. Indeed, class conflict has always marked the beginning of major urban transformation projects, changing the very nature of the city. The city transitions from a sovereign political entity known as the *civitas* to an economic machine where the city and its territory are intricately intertwined within a totalizing production system. Geometric shapes and straight roads are an exorcism of conflict and an ideological sublimation of the need for extensive control of space. The city center survives only as a symbol or, at best, as leverage for rent. As early as the sixteenth century, Sebastiano Serlio included descriptions of models of houses for rich professionals and for poor peasants and artisans in his treatise on housing, *Book VI, sulle habitationi di tutti li gradi de gli huomini*. These latter were a means to wrest essential laborers from vagrancy and nail them down to domestic routine and private home ownership.[51] So, too, were company towns. It is clear a company-town house was, as Le Corbusier says, "a machine for living." This expression overturns all the values of a pre-capitalist society. The word "machine" is often associated with the factory; here it is juxtaposed with the house. Thus, it is perhaps the house that becomes a factory, not of goods but a factory of lives, of a "new man" for an industrial society: the house as the very extension of the factory. One cannot exist without the other. The very architecture of the twentieth century takes on the features of the building innovations and materials of the factory.

The factory is no longer a building or even a place; rather, the factory is a set of machines, a spatial diagram the function of which is to adapt physical space to the technical composition that makes productive work and its exploitation possible. It has no definite form but rather is an evolving process that innovates and organizes the territory. Not surprisingly, even today, many disused factories have become museums or offices. If there is a factory, there is a logistics network that coordinates machines, transportation, flows of people, raw materials, and goods: the scope of the factory is always the territory. It is a flexible and infinitely extendable territorial organism whose task is to reproduce and organize labor. The factory begins to take over all the spheres of society and invades the entire network of social relations. It sets in motion a process of "factorization" of society.

However, at the very moment when capital realizes this increasingly organic and totalizing relationship between things, it also manages to mystify it and render it invisible. Tronti observes that at the moment when an entire society is subsumed by capitalist production, the factory paradoxically disappears. Similarly, the exploitation of reproductive and affective labor that is necessary for the formation of the working class also disappears. In other words, within the factory that becomes society there are not only (male) workers but, as Leopoldina Fortunati has written, also housewives and prostitutes, whose labor has for centuries been hidden and exploited within that formidable bourgeois invention that is the home as "private refuge," as a place of non-work. This is the "total factory" that defines today's society, in which the boundaries and place of the factory itself disappear. It is an invisible system now fragmented by the digital. New ways of living are emerging, in which there is almost a return to factory work at home, through smart working, which disappears altogether and reaches unprecedented levels of exploitation. There are no longer a real master and a real worker; consequently, there is no class struggle, and the mass worker becomes the

51 Pier Vittorio Aureli, *Il ritorno della fabbrica. Note su territorio, architettura, operai e capitale*, OperaViva Magazine, December 31, 2016, https://operavivamagazine.org/il-ritorno-della-fabbrica/. Accessed December 5, 2023.

mass bourgeois. Everything is devious and silent, a network that encompasses everything. If company towns were formerly created distant from society itself, creating clear limits and boundaries stemming from the rejection of urban disorder, today it is the other way around. It is a system that involves society in its entirety.[52]

Always referring to the surroundings of Biella, the most modern reinterpretation of the company town came about through Adriano Olivetti in Ivrea. He worked tirelessly not only for his own company but above all to completely renew the ways and sense of industrial work in Italy. He saw the factory as a community, as the place that produces goods and non-goods, in a perspective that did not limit profit to mere enrichment but understood it as a surplus to be reinvested in the territory, the quality of life of workers, and the ecosystem. It was a new vision of work in which the responsibility of all actors replaced traditional paternalistic authoritarianism. To adapt work to human needs (and not vice versa) Olivetti brought poets and intellectuals into the factory, entertaining workers with film screenings, libraries, and advanced social services. His was an attempt to create a new human model of solidarity between entrepreneurs and workers, between factory, city, and country. He identified the third way between communism and capitalism.[53]

The result of the company-town phenomenon is the city that, like Biella and many others, creates its identity through industrialization, but over time becomes a mere reflection of a failing, phantasmagorical, empty, and dangerous system. What, then, will be the correct approach for the reuse of these empty spaces in a society that is constantly changing?

52 Ibid.

53 "Ivrea, sulle tracce di Adriano Olivetti: Un viaggio a Ivrea nei luoghi di Adriano Olivetti, rivoluzionario gentile dell'industria italiana," Booking Piemonte (July 6, 2015), accessed December 5, 2023, https://www.bookingpiemonte.it/scopri-il-piemonte/personaggi/ivrea-sulle-tracce-di-adriano-olivetti/.

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Serena Mazzetti earned her degree in architecture from EPFL in 2024. Her research project, *Factory of Lives*, focuses on the analysis of company towns and the new possibilities they might represent for our society today. She conducted this research under the supervision of Pier Vittorio Aureli (TPOD, EPFL) and Theodora Giovanazi (TPOD, EPFL).

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