



Designing Bata Society: a Case Study of Zlín

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Introduction

Zlín, located in the east part of the Czech Republic, is a historical industrial town. The development of this modern city has a deep connection with Bata shoe company and its social scheme. One may find the company's name sounds familiar, then check out the shoes, they may bear the Bata logo. The company, founded in 1894 at Zlín, has almost 130 years of history. Today, Bata is a large multinational company that owns production facilities in 20 countries with retail stores in over 90 countries. The company has been known for its shoe production and the urban and architectural values from its pioneer and utopian town planning and its variant modules of building design.

Throughout the early 20th century, the founder of the enterprise, Tomáš Baťa, along with the design department of Bata company, transformed Zlín from a flourishing trade and craft town into a modern, garden environment, industrial city optimised for Bata workers. Inspired by English urban planner Ebenezer Howard, Tomáš and several architects tried to achieve a modern living environment in Zlín by combining the aspects of country living with the conveniences of city life. One of Tomáš' principles is "build collectively, live individually"; at a certain level, he realised his vision.¹ Thousands of free-standing family housing were placed among the sizeable green land around the early 20s to late 30s for the Bata employees and their families.

It was a standard pragmatic solution for all the modern industrial enterprises in the last century to build a company town that provided accommodations and services to enhance productivity. The operating system of Bata town was highly inspired by Fordism and followed the principle of industrial capitalism. Yet, the urban development of Zlín was based on socialist principles where architecture and social interaction served to create a homogeneous world. Tomáš once describes himself as "a collectivist and something like a communist, but decidedly a socialist".² One could find many constructivist styles

- 1 Vladimír Šlapeta, *Bata: Architecture and Urbanism 1910- 1950* (Zlín : Verlag nicht ermittelbar, 1992), 10.
- 2 Martin Jemelka and Ondřej Ševeček, "The Utopian Industrial City: The Case of the Baťa City of Zlín," in *Industrial City: History and Future*, ed. Clemens Zimmermann (Frankfurt: Campus Verlag, 2013), 250.

of office buildings, gathering squares, and department stores in the city centre. Additionally, the brand was associated with the notion of plain and affordable clothing for a very long term. In Zlín, socialist and capitalist influences can be seen side by side.

As a means to study the topic of company town at Zlín from the academic point of view, all the references are carefully selected to discuss the topic from a fresh perspective. The study of Zlín and Bata Town is not a new topic. Many remarkable architects have participated in design projects at Zlín, bringing much attention to scholars in architectural history. Many articles, websites and books are published regarding the topic and are available in many languages. In this thesis, the selected sources are mainly in English. In May 2009, a symposium, “A Utopia of Modernity: Zlín”, was held at Zlín and Prague by German Federal Cultural Foundation as part of the Zipp-German-Czech Cultural project.³ Later, they published an anthology and a few website pages to present their research. To ensure the diversity of study sources during the research process, the selected articles are written by authors who vary in study field and educational backgrounds, such as architects, planners, sociologists, and economists.

People may wonder what makes the purpose of this paper different from the previous research. This thesis aims to emphasise the perspective of workers who work and live under the Bata system. The analysis of urban planning and architectural design in Bata’s factory town vividly reveals the life story of the working class on the land of Zlín, at the same time demonstrating how design as a medium helps to affect and shape the culture, society and even individual mentality. The study focuses on multiple architectural scales, from urban to housing design. Analytical illustrations, photos, and drawings will be presented to accompany the texts. Interviews and quotes from people who have a direct relationship with the Bata factory are also collected in this paper. A comparative investigation will be done to reveal the Bata factory’s speciality from aspects of the operating system, factory settlements, and its social values.

The paper consists of three chapters to discuss different aspects of Bata town. It first begins with an overview of the historical context and operating system of Bata company and a brief introduction to one of the best-known Czech entrepreneurs, Tomáš Baťa. Chapter two focuses on the urban development of

3 Katrin Klingan and Kerstin Gust, “Preface,” in *A Utopia of Modernity: Zlín*, ed. Katrin Klingan (Berlin: Jovis, 2009), 9.

Bata town --- from theory to reality, from a factory complex to a flourishing self-sustained town; based on this, the influences of urbanisation on the lifestyle of residents and social interaction of the community will also be discussed in this chapter. The last chapter explores the design and construction methods of the company housing and analyses the variant types of housing from the perspective of the collective to the individual.



Chapter 1: The Spirits of Bata

1.1 History of Bata Company

In September 1894, Tomáš Baťa and his siblings, Antonin and Anna, established a shoemaking company at Zlín, with 50 workers to make shoes at the rate of 50 per day.¹ However, Antonin and Anna left the business in the summer of the following year; simultaneously, the company faced some financial difficulties. Tomáš was not ready to give up. As the company could not afford leather, he replaced it with a cheaper, more durable material: Canvas. “Batovka”, the simple design of canvas shoes with leather soles, later became one of the great successes in the 20th century [Figure 1].² Plain and affordable clothes also became the labels of Bata. Four years later, Tomáš returned from a trip to Germany and installed the first steam-driven machines, beginning a period of rapid modernisation.



Figure 1.
Photo of Batovka shoe.

- 1 Zdeněk Pokluda, “An Outline of the History of Bata and Zlín in Dates,” in *A Utopia of Modernity: Zlín*, ed. Katrin Klingan (Berlin: Jovis, 2009), 18.
- 2 Mariusz Szczygieł, “Not a Step without Bata,” in *A Utopia of Modernity: Zlín*, ed. Katrin Klingan (Berlin: Jovis, 2009), 19.
- 3 *Ibid.*, 21.
- 4 *Ibid.*

In the first decades of 1900, Tomáš visited and worked at several shoe factories in the US, which was inspired by the American mass-production system. “There are 86,400 seconds in a day”, a quote from Tomáš, was also written on one of the factory walls.³ The efficiency in the production line became the key for Tomáš’ shoe business. He continued buying new machines from Germany and America. By the end of 1910, six factories were operating in Zlín with 600 workers; it only takes four hours to make a single pair of shoes.⁴ At the same time, Bata tried to offer better quality shoes at affordable prices and available in all kinds of styles.

With the rapid population growth, in 1912, flats next to the factory were beginning to be built for Bata employees. In the following years, the business expanded to include a tannery, electric power plant, farms for food supply, factories of brickmaking, and sawmills. By 1918, Tomáš established branches of Bata in different fields. A large part of Zlín and surrounding regions have been “Batized”. In the same year, Jan Kotěra proposed a land-use plan for buildings located in the south of the town, including a residential quarter and a commercial and social centre. Bata shoes were sold abroad and opened their European market. From 1921 to 1924, Bata company set up subsidiaries in many European countries. The number of employees at Zlín rose from 1802 in 1923 to 8300 in 1927.⁵ At the same time, shoe production and housing demand increased rapidly; the figure shows the incrementality from 1894 to 1935 [Figure 2].

Tomáš died in a plane crash accident in July of 1932 at the age of 56.⁶ The company’s control was passed to his half-brother, Jan Baťa, who created a new era for Bata. He continued Tomáš’ plan, expanding the company six times more than its original size. During WWII, Jan emigrated to the US, and Tomáš’ son, Tomáš Jr., settled in Canada. Later, Jan established the Bata company in Brazil, and Tomáš Jr took control of the Canadian branches. All the businesses in Czechoslovakia are nationalised after WWII. By the end of 1950, this young family-owned enterprise turned into a gigantic concern with global reach in European countries and other countries in North and South America, Asia, and North Africa. Throughout the history of Bata, the company experienced leadership from three Bata representatives in the family, Tomáš Baťa, Jan Bata, and Tomáš Baťa Jr. The stories of them were remembered.

5 Zdeněk Pokluda, “*An Outline of the History of Bata and Zlín in Dates,*” 22.

6 Szczygieł, 29.

1.2 Tomáš Baťa and Fordism

Tomáš Baťa was born in 1876 into a family of local craftsmen whose father, Lukáš Baťa, was a shoemaker in the town. As Tomáš grew up, he did not carry on the craft skills from his father. Instead, he focused on how to operate and expand his business in modern era. To understand Bata’s success story, various conditions impacting the development, both external and internal; technology and economics were the two essential

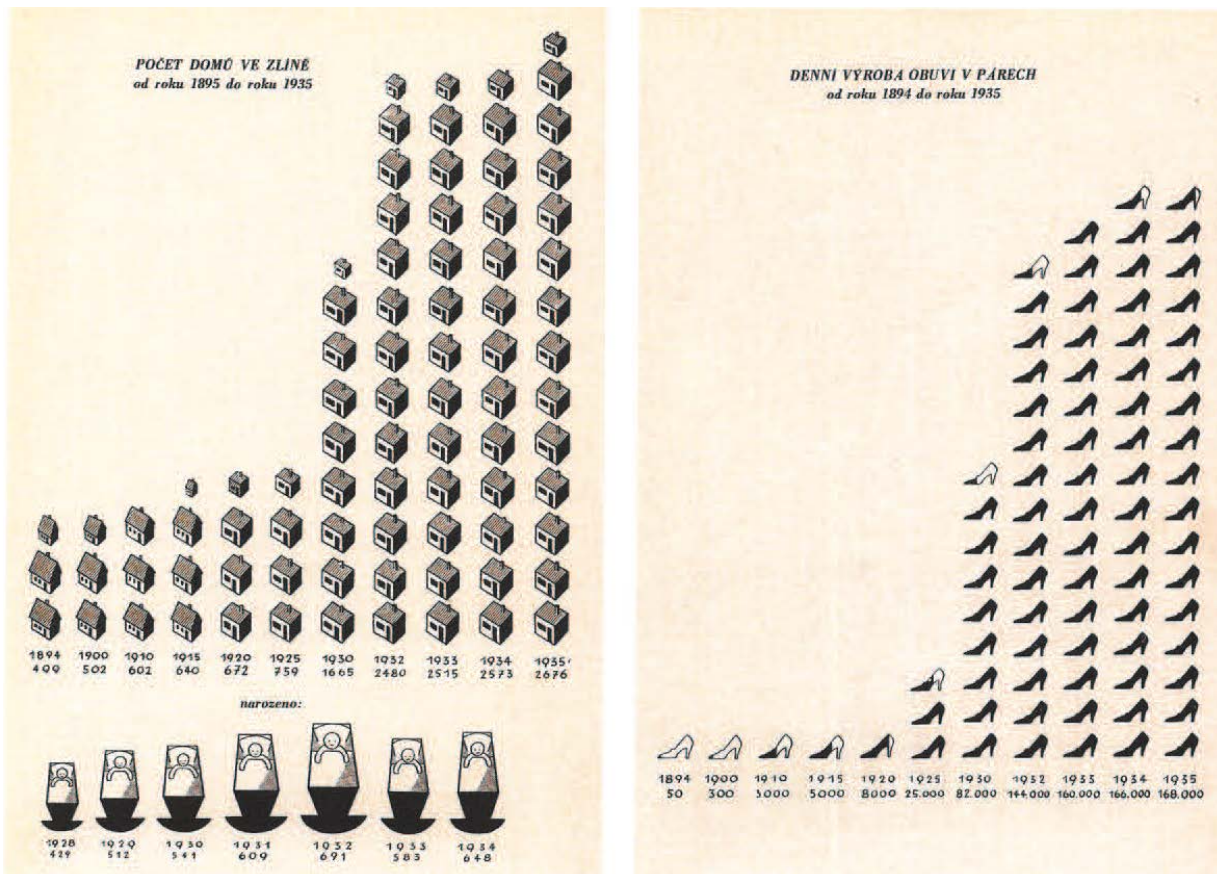


Figure 2.

The incrementality diagram of housing and population of workers from 1894 to 1935.

aspects that promoted the prosperity of businesses. During the interwar years, Bata was confronted with similarly revolutionary changes and processes to those in the automobile industry often associated with Henry Ford. Fordism triggered new ways of production and more technological advancements; mass production, standardisation and mechanisation were applied to Bata factories. The company rationalised craftsmanship to a more standardised working procedure that can be operated by machines and semiskilled labours on assembly lines. This industrial revolution dramatically reduced the production time; 16 million pairs of shoes were made at factories at Zlín in 1927, and the manufacture of shoes developed to its highest level.⁷

On the other hand, one of the substantive principles of the enterprise was vertical integration. This principle ensured the fastest value chain flow through all production steps, from collecting and processing raw materials, moving to designing and producing in the factory, to the final step, distributing and selling the finished shoes at Bata-owned retail chains. The supply

⁷ Pokluda, 24.

of labour and materials at every stage was primarily controlled and involved by the enterprise. The system was characterised as self-sufficient in all substantive areas of its activity. This marketing strategy resulted in a more efficient business with lower costs and more profits, which helped Bata develop its international markets in the future.

Tomáš' consideration of technology and economics is also reflected in his opinions on the field of architecture. During the conversation with Vladimír Karfík, Tomáš addressed his thinking of architecture as a "product", which,

"I have the feeling that the main concern of most architects is to build themselves their own monuments ... Building is supposed to serve us and our people. There are other values: time, science and technology. For us, the most important of these three is time- by not paying enough attention to time, science and technology can lose part or all of their value and economic losses can be enormous. An architect should keep up with everything that's new and progressive in the world in architecture, in production technology and economics."

--- Tomáš Baťa⁸

Any Bata style architecture at Zlín could perfectly address Tomáš' opinions on production technology and economics in architecture. A reinforced concrete frame with a unified span of 6.15 x 6.15 meters was designed by Frantisek L. Gahura, who worked in Bata's design department.⁹ This framework was first used as a structural system for all the factory buildings, and later been standardised and used in many large-scale projects, like hotels, community houses, and boarding schools in the town. The concrete skeleton constructed with the infills of brick claddings and metal window frames gave rise to the image of Zlín --- a thrifty, rational and functional city [Figure 3]. This unified constructional system was efficient, economical, and flexible. With the standard structural grid, the factory complex could be extended and adapted whenever necessary and with some modification. Moreover, bricks and window frames were manufactured under Bata's business network, giving the enterprise absolute control over constructional cost and time. Just like Bata's shoe production, the company developed an effort to be self-sufficient in all substantive areas of its activities; starting from the company-owned design

⁸ Šlapeta, *Bata: Architecture and Urbanism 1910- 1950*, 9.

⁹ Dagmar Nová, "They were Ahead of Their Time," in *A Utopia of Modernity: Zlín*, ed. Katrin Klingan (Berlin: Jovis, 2009), 43.

department introducing the creation of the “Bata skeleton”, then to the stage of construction where the materials and labours were all supplied by the enterprise, and in the end, the results benefited the residents of Zlín, who also been a part of Bata family. The results of industrialisation in shoe production were successful. However, different from products, architecture has a more significant impact on individuals and societies. Rational thinking in technology and economics predominantly affects architectural design and construction methods. The unification of material and structure systems resulted in a homogeneous living environment.

Although Tomáš’ business thinking influenced his points of view on architecture, as a client, he supported many advanced architectural proposals and urban theories and realised them in Zlín. The town attracted the attention of many like-minded architects; Jan Kotěra, František L. Gahura, Vladimír Karfík, and Le Corbusier participated in the town planning and project design. The garden city movement initiated by Ebenezer Howard later inspired Gahura when he proposed the first draft of residential district planning in 1918 to accommodate the rapid population growth in the following two decades.¹⁰ Today, one could find hundreds of double-storey brick housings uniformly distributed in the three residential districts around the town’s centre. The efficiency in building construction and the community’s growth achieved a state of mutual development at Bata.

10 Ladislava Horňáková and Zdeněk Chládek, “The Urban Development of Zlín and Urban Planning,” in *A Utopia of Modernity: Zlín*, ed. Katrin Klingan (Berlin: Jovis, 2009), 91.

Figure 3.
Photo of Zlín.



1.3 Bata System

“At Zlín I found some clever original principles, for example the standardisation of all the loadbearing parts of buildings...., have a uniform skeleton that integrates the interrelated parts into a harmonious unit..... The bosses and the workers of Zlín seem to be really united by one common idea and they display a collective enthusiasm. This is exactly what the world needs, and all this is not due to greed, but to higher intentions: it is due to the family spirit which exists here.”

----- Le Corbusier, 1935¹¹

The “family spirits” addressed by Le Corbusier did not happen by chance in every company town --- they “originated” in Bata. But how? Rationalisation was one of the keywords used to describe Tomáš’ personal beliefs and business strategy, and he encompassed the same logic in the Bata town. The term rationalisation, defined by *Wikipedia* under the field of sociology, replacing traditions and values as concepts of behaviour in society with rationality and reason.¹² Therefore, one could consider the Bata system as the result of Tomáš’ action in rationalising the social structure of the company based community. The system was embodied in many aspects of Bata capitals, both materially and spiritually.

As an entrepreneur, Tomáš was willing to take greater responsibility for the workers’ living conditions. He cared about employees’ life outside of work. Different kinds of recreational facilities were built to satisfy the needs of social interaction and entertainment. In 1938, more than 60 sports, commercial, and cultural associations were built to make up a ‘civic’ Zlín.¹³ Bata arranged all kinds of activities for the employees outside of work. Workers started a day with the time-punch machine and moving assembly line, having lunch breaks on the lawn at Labours Square. When the shift changeover, they exercised on the sports ground of the Sokol Hall and took drawing classes at the art school. Those activities were collective, united and inclusive [*Figure 4&5*]. That was how the company got involved in employees’ lifetime, as the everyday routine in Zlín was undoubtedly in accord with the default settings followed by the Bata System. In addition, the collective lifestyle created a strong social bonding between individuals and whole communities,

11 Vladimír Šlapeta, *Czech Functionalism : 1918-1938*, 115.

12 “Rationalization (sociology),” *Wikipedia*. [https://en.wikipedia.org/wiki/Rationalization_\(sociology\)](https://en.wikipedia.org/wiki/Rationalization_(sociology))

13 Annett Steinführer, “Uncharted Zlín: The Forgotten Lifeworlds of the Bata City,” in *A Utopia of Modernity: Zlín*, ed. Katrin Klingan (Berlin: Jovis, 2009), 111.



Figure 4.
Employees working at production
the hall.



Figure 5.
Workers are having a lunch break
at Labours Square.

which means one may play multiple social roles to another as changing in a social occasion.

A coin always has two sides. The criticisms of the Bata system: financial incentives and company social policy demand workers physically and psychologically, leading to the maximum possible workload. The Bata system and its regulations were considered methods of capitalist exploitation in disguised form. The book *Der unbekannte Diktator Tomáš Baťa* (The Unknown Dictator Tomáš Baťa), written by Rudolph Philipp, aimed “to strip the Bata system of its cloak of welfare” and reveal how

those cheap shoes were produced under pressure, as well as prevent further expansion of similar system.¹⁴ He presented many evidences to prove the intention of creating unfair treaties. For instance, the lack of a third party between employer and employee, such as trade unions, leads to a one-sidedly favoured relationship.¹⁵ Another scathing criticism was the unrealistic request on production performance, which was also the prerequisite for profit sharing, leading to longer working hours and potential overtime.¹⁶ The wage system and long working hours also contributed to the pressures on workers. The limited job offers during the interwar gave no choice to people but worked harder than usual. “[Bata] forces no one to do anything; his system takes care of that”, Philipp pointed out, revealing the principles of this machined-liked company town.¹⁷

A new social order was created based on the principles of the Bata system. It was not just a company regulation anymore, but the discipline for this inner society. Bata system was created to benefit workers in a certain sense. However, it created a social yoke that manipulates the people. It was fulfilling but disciplined. With the living pressure from workers, it was easy to create a competitive working environment. Additionally, when all the people have similar lives, the individual realisation becomes smaller, where the notions of living as a group enlarge; as a result, those unfaired rules are not heeded by anyone.

14 Steinführer, “Uncharted Zlin: The Forgotten Lifeworlds of the Bata City,” 109.

15 Ibid., 110.

16 Ibid.

17 Ibid., 112.

Chapter 2: Formation of Bata Town



Figure 6.
Aerial photo of the residential district at Zlín.

2.1 Zlín: A Company Town in Garden

The case of Zlín can be classified as an industrial settlement built and administered by one enterprise, known as a company town. This type of town settlement was first initiated in the area where extractive industries existed, the availability of raw materials was the determinative factor for the establishment.¹ Most company towns were isolated from neighbourhoods or far from the city centre, and factory buildings became the origin of expansion. The town required some basic infrastructures to sustain a standard of living because of its geographic location. Those places are often associated with the social issues of emerging industrial civilisation and environments. Therefore, the workfare of employees brought the attention to some entrepreneurs, like Tomáš Baťa.

Zlín was developed based on this structure of a company town with the sense of "care" that stems from social conscience

¹ "Company Towns: 1880s to 1935," The Social Welfare, VCU Libraries, accessed March 12, 2018, <https://socialwelfare.library.vcu.edu/programs/housing/company-towns-1890s-to-1935/>

and responsibility, which led to innovations in town structure. For instance, the welfare system --- the company store often has a monopoly in the town, allowing workers to pay in scrip or set a lower price than the general market.² The system was created to attract labours (it is also a part of economic strategies to take a wage reduction as the standards cost of living was reduced).³ Additionally, the town was formulated by Bata's vision of an industrial community, "factories in garden", a fixed module of buildings set in an orthogonal network of street and green spaces.⁴ This urban strategy got inspiration from the theory of Garden City movement, responded to the need for improvement in the quality of urban life (with the issue related to overcrowding and congestion), and created a harmonious community that captures the primary benefits of the suburban and municipal environment. Residential housing, as one of the crucial components in the system of company town, was also under Bata's consideration. With an interest in healthy living, Gahura developed a unique community planning for the residential districts in the early 1920s [*Figure 6*].⁵ Individual housings were situated in a large green land area to provide access to open green space for individuals. The design of houses ensured a quality living environment related to the common notion of ideal middle-class lifestyles in the last century. Consequently, the unique inventions in Zlín made it known as a "model of company town". It introduced a healthy living environment with the establishment of industrial urbanism. Tomáš extended his attention from industrial activities to a social level, which corresponded to the purpose of Bata system.

With the growth of Bata, its unique town settlement can be found in many European cities, such as Otmet in Poland, Mohlin in Switzerland, East Tilbury in England and Best in the Netherland.⁶ Zlín's urban planning was almost like a "colonial package" that included "building and town plans, construction supervisors, formwork and manufacturing machinery, a cadre of instructors and their families, as well as the Baťa management and social program officers".⁷ Those satellite towns were born with the distinctive signature of Zlín, a basic structure of a company town with Bata style architecture and urban rhythm. Bata created a powerful network that connected the development of an urban system with industrial activities and integrated the idea of Bata System within a sense of community.

2 Jane Parvitt, "The Bata Project: A Social and Industrial Experiment," *Twentieth Century Architecture*, no. 1 (1994): 36.

3 Ibid.

4 Petr Všecká, "Bata's Grid Between Restoration and Transformation," in *A Utopia of Modernity: Zlín*, ed. Katrin Klingan (Berlin: Jovis, 2009), 173.

5 Horňáková and Chládek, "The Urban Development of Zlín and Urban Planning," 91.

6 Pokluda, 30.

7 Kimberly Elman Zarecor, "The Industrialization of Housing: Zlín and the Evolution of the Panelák.," in *Manufacturing A Socialist Modernity: Housing in Czechoslovakia, 1945–1960*, (Pittsburgh: University of Pittsburgh Press, 2011), 234.

2.2 History of Town Development

The concept of functional city was discussed during the CIAM 4 congress in 1933, determined that a city should be divided into zones based on the functions of living, working, recreation and transport to support a daily living routine.⁸ During the lecture held in 1929, Le Corbusier addressed his technocratic fervour, that “urban planning is not gardening, but a tool factory”.⁹ His idea of “strip city” also dates from that period. The idea of function from CIAM and concepts of future urban strategy from this world-leading architect significantly impacted the planning of Zlín as an industrial town. In 1923, Tomáš won the local election and became the mayor of Zlín.¹⁰ Tomáš began to implement his visions in Zlín --- a city that supports the needs of a modern man with the aspect of living, working and entertaining. Zlín’s industrial identity and the formation of industrial urban life are closely related to the development and growth of Bata over the last century. The urban settlement of Zlín has a clear organisation based on the primary principles of Bata system and Tomáš’ visions of creating an ideal community, which are reflected through its functional zoning, transportation routes, and composition of its architectural volumes.

2.2.1 1918-1925: Linear Urban Scheme

The town map in 1918 showed Zlín’s historical city centre before its industrial transformation [*Figure 7*]. The exited town settlements were located at the south of the railway, where Peace Square (Náměstí Míru), the historical town centre, was enclosed by four sides of low-raised rowhouses. The new town hall on the square was completed in 1924 and became the representative of Zlín [*Figure 8*].¹¹ The town centre remained the same later on to remind residents the past of Zlín. The railway was the primary determinant in urban planning as its west-east orientation defined the future linear urban development. It also brought convince in transportation, which was a crucial factor for civic development and economic growth in an industrial town. Most of the constructions between 1918 and 1925 happened in the western part of the town. To deal with the accommodations for the growing employees in the factory, the first residential district (the Letná neighbourhood) was planned in the west-south of town, located near the factory complex. Additionally, a large

8 “Making the Functional City,” RIBA Collections, CIAM 6, accessed September 15, 2017, <https://www.ciam6.co.uk/project/making-the-functional-city/>

9 Karin Wilhelm, “The Earth, A Good Domicile’: Ambivalences of the Modern City,” in *A Utopia of Modernity: Zlín*, ed. Katrin Klingan (Berlin: Jovis, 2009), 231.

10 Pokluda, 22.

11 Horňáková and Chládek, 91.

piece of land nearby plants was reserved for further expansion. The town development followed a linear scheme formed based on the orientation of the railway and showed a clear distribution of the relationship between the places for labour and living.



Figure 7.
The built-up area of Zlín, 1918.

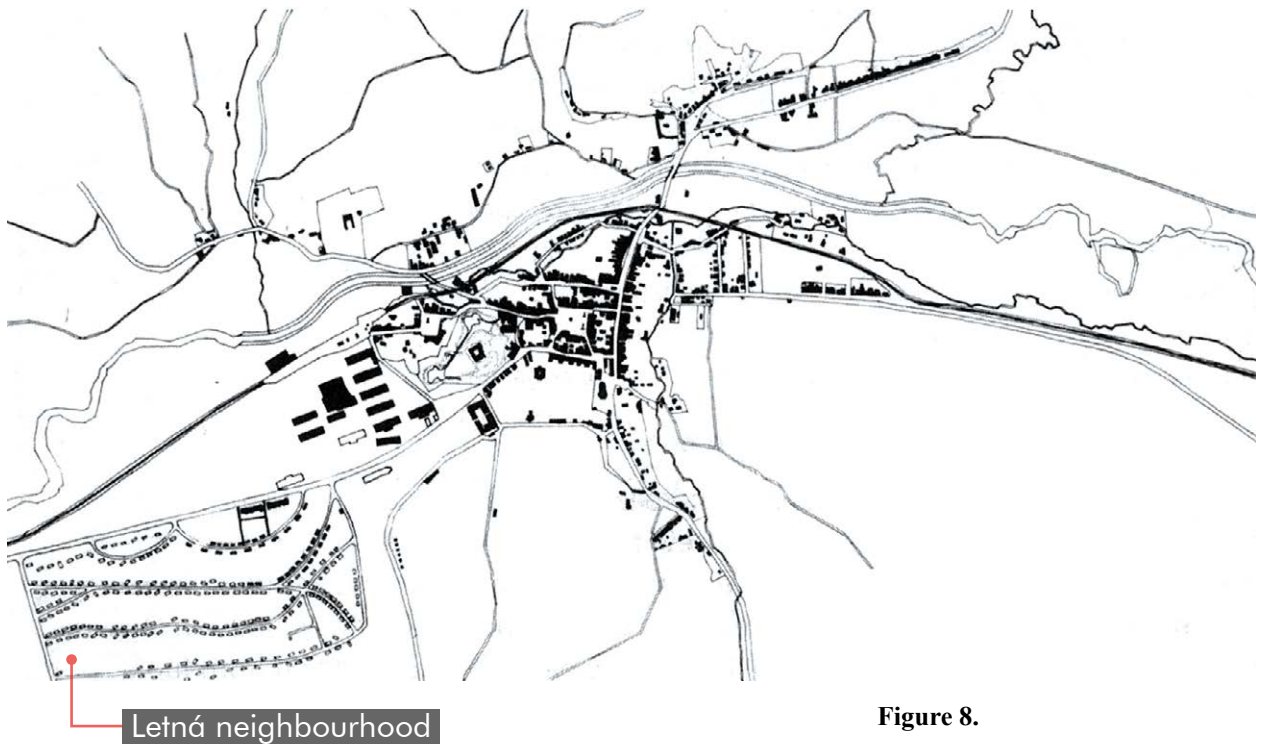


Figure 8.
The built-up area of Zlín, 1925.

2.2.2 1925-1935: Functional Zoning and Town Identity Transformation

Within the following ten years of town development, there has been an apparent transformation of identity in Zlín revealed through urban planning, from a historical village town to a Bata dominated company town. The construction of Zálešná and Podvesná residential district began in 1926 in the north-east corner along with the flow of Dřevnice River [Figure 9]. There was an increase in housing density in the Letná district. This clear zoning division between the residential areas and the rest of the town facilities was defined by its function. Similar principles were carried out in shoe factories where specific procedures in production happened in different factory halls. This disciplined zoning system also applied to the design of industrial areas. New factory halls were situated further west neared the railways to keep the convenience in freightage. This linear traffic route running from the east to the west provides a simple and efficient traffic junction, allowing employees to save time in commuting. With the careful planning of the distance between individual zones, this function system can achieve within walking distance. Jiří Voženílek, one of the influential architects involved in the construction of Zlín, addressed his opinion on functional zoning in a linear city:

“The extent of a built-up area and the size of a linear city is defined by the maximum distance to the workplace. This should apply to both a settlement with no need of public transport and also to an area of extensive urban development with the necessity public transport. The maximum distance between workplace and accommodation is specified as a 20-minute time loss for commuting.”

----- Jiří Voženílek, 1947¹²

With the example of Zlín, the horizontal length of each functional zone was relevantly the same in distance. According to the time estimation on *Google Map*, the distance travelled from a house in the Zálešná district to one of the factory buildings in the west is around 2.9 kilometres, which took about 6 mins by driving; 17 mins by public transportation, and 32 mins by foot.¹³ To restrict commuting time, the new development of residential areas in 1935 was located on the east side of the town

12 Alena Kubová, “Batovany/Partizanske: A contribution to the Concept of the Functional City,” in *Company Towns of the Bata Concern: History, Cases, Architecture*, ed. Ondřej Ševeček and Martin Jemelka (Stuttgart: Franz Steiner Verlag, 2013), 261.

13 Google Map. <https://www.google.com/maps>

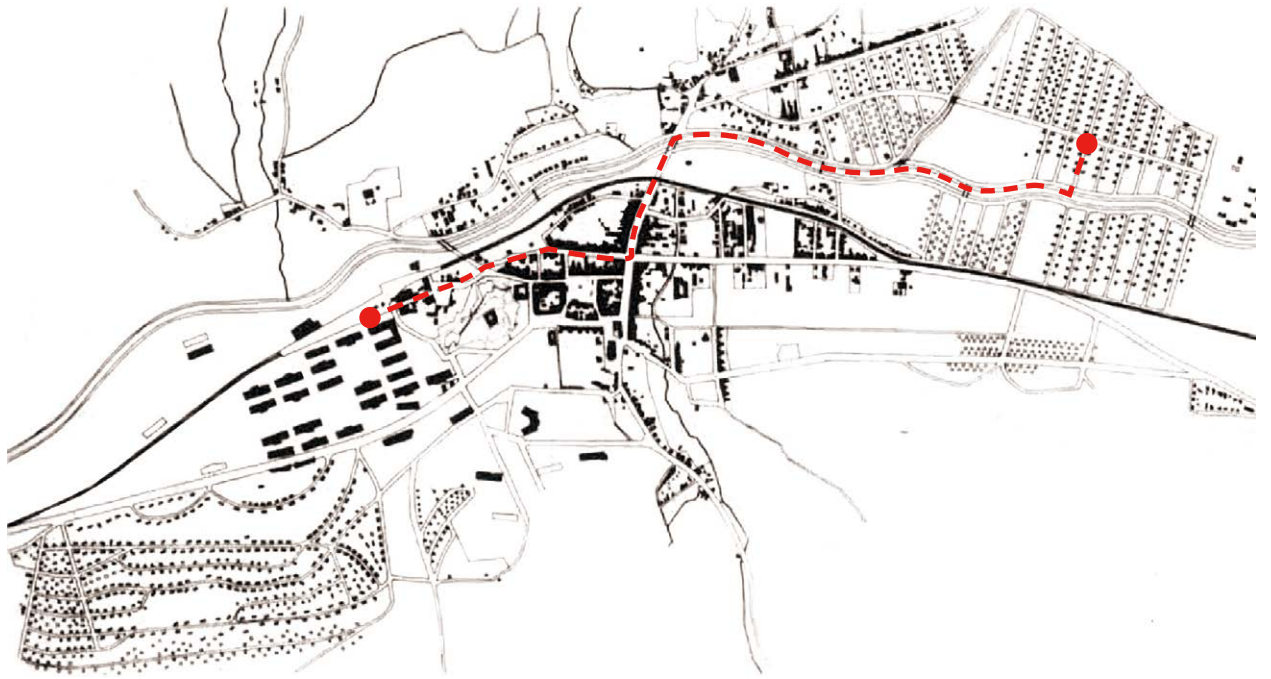


Figure 9.
The built-up area of Zlín, 1931.

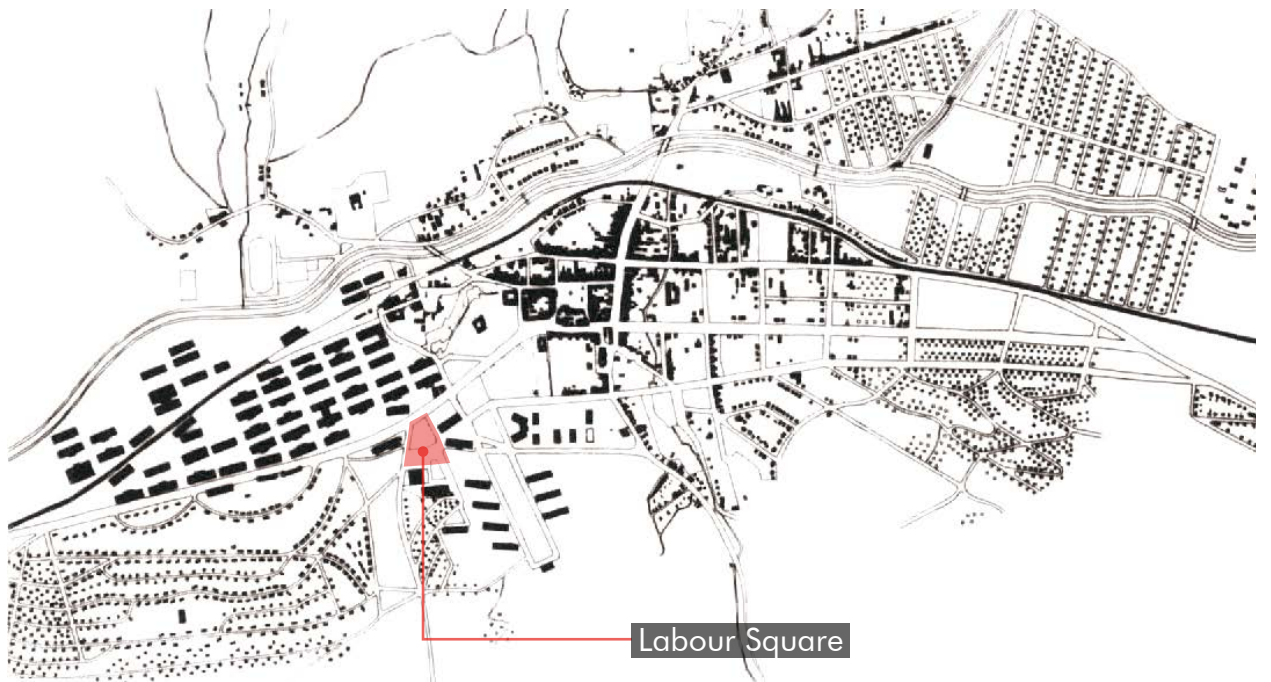


Figure 10.
The built-up area of Zlín, 1935.

[Figure 10]. The size of each function zone was based on Bata employees' commuting distance, which resulted in the whole urban planning into an industrial-orientated town. This zoning strategy also limited the town's development as one functional zone reaching a certain size. Comparing the development of the industrial zone with the map of 1931 and 1935, a clear increase in building density reflected a lack of space for the industrial zone. The limit of this urban strategy also appears in terms of forming a healthy community. Despite the fact that this functional planning reduced people's time in commuting, the system regulated the workers' geographic location and life patterns. Residents at Zlín lived side by side, worked at the same place, shared similar social backgrounds, and had a similar stages in life. Bata town raised their workers as if assembly lines produced the goods. Functional zoning as a way of social control produced monotony and boredom in society. This highly industrialised urban planning lacked the considerations of social liberty. However, under cover of extensive greenery and open space, this machine-like urban environment did not seem exposed to the residents.

Gahura proposed a main boulevard across the whole town and connected a branch boulevard in the upper east to the Zálešná district.¹⁴ The interest in healthy living was brought up to balance the rapid increase in industries. Parks, orchards and greenery in residential districts were proposed to ensure access to airy open spaces. Its planning took into consideration not only the industrial zone but also the town as a whole. The original slogan, "a factory in garden," was later changed to "a city in garden".¹⁵ The classic Bata slogan proved that the Bata system started to permeate the whole community with urban development.

14 Horňáková and Chládek, 93.

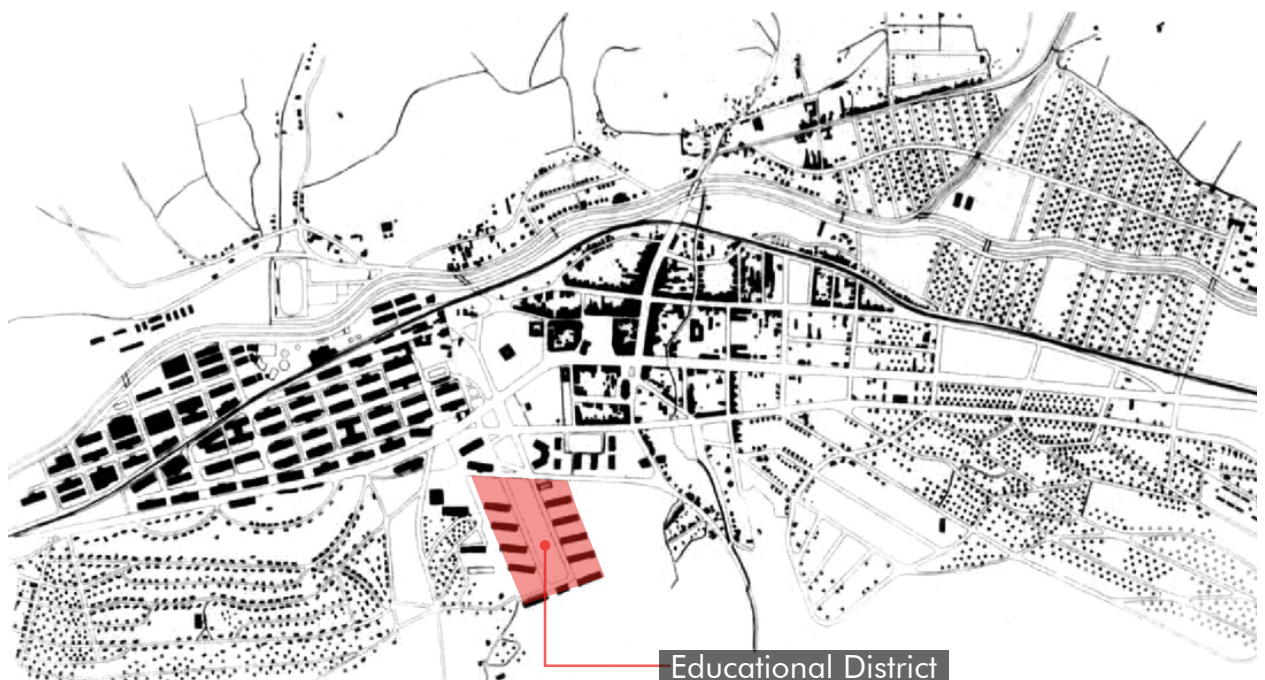
15 Ibid., 94.

2.2.3 1935-1944: Rhythms of the City and its Public Space

Seventeen years of urban development made Zlín became one of the most famous company towns in the world. The year 1935 introduced the network of Bata town to the field of architecture. Le Corbusier was invited on a trip to Zlín and later proposed several design projects for Bata. The Bata design department held an international design competition for

workers' housing, which involved many architects worldwide. Around the same time, a couple of large-scale buildings with public functions were opened to use, which completed the aspect of entertainment in Bata communities. One important urban space would be Labour Square [indicated in *Figure 10*] and its surrounding buildings. According to Gahura's master plan, the Labour square was designed to replace the historical centre, Peace Square. It functioned as a commercial and social centre to gain more coherence for Zlín's new industrial identity. The square was situated in front of Hotel Spolecensky Dum (Social House) and faced a nine-storey department store and a market hall. The nature of those public programs introduced an urban lifestyle and consumption habits to the employees and young adults. Zlín was no longer a town for the production. Instead, it transformed into a town for consumption, which completed the community structure, creating a self-sustainable town. Additionally, the square located between the production complex and the reserved area of working schools became the front image for Bata's shoe production industry. The square's name working together with its function and social quality, addressed a strong notion that the place belongs to workers. The senses of belonging and fairness were exactly what Tomáš tried to foster through Bata systems. The design of Labour Square was a good demonstration of how to implement social ideology in creating a public space.

Figure 11.
The built-up area of Zlín, 1944.



Bata paid much attention to educating the future workforce. Working schools were built for the younger generation in the town whose family members also worked for the Bata. The educational district was located on the southeast side of labour square, where a boulevard was planned in the centre and surrounded by the boarding school buildings [*Figure 11*]. The Tomáš Baťa Memorial is located at the south end of the boulevard. A coherent urban scene was created in the industrial district: it started from the advanced industrial complex, then to the commercial-orientated relaxing square, passed through rows of institutional buildings with extensive greenery, and ended with a monumental architecture that deeply connected with Bata's leading character, Tomáš Baťa. It was a part of everyday life for all Bata's employees. Workers conceived this series of urban public spaces in terms of functionality or aesthetic purpose and in analogy to human mental dispositions-- a fairer and free society. Compared to what happened in the rest of the world during the interwar period, Bata created a meaningful, psychologically effective urban environment throughout its architecture and public space.

Due to its stable and long-lasting character, urban development can be used as a representation of cultural value and a means of socio-political control. Architecture helped to determine the rhythm of the town and the characters of its surrounding urban space. Under Bata's guidance, Zlín was not just a company town built in gardens. The idea of community and service was embedded in the planning of Zlín. The functional zoning system established a social coherence by geographically forcing individuals to work and live in a certain area. At the same time, the cultural and recreational areas provided a sense of freedom and protection. Different kinds of spatial qualities worked together on the land of Zlín to emerge a complete and developed Bata town.

Chapter 3: Individuals Living in the System of Collective

3.1 Individual Perception of Bata Housing

In 1931, the population of Zlín was researched to 100,000.¹ With the ongoing growth in the workers' population, personnel management was an essential determinant of the enterprise's success. Even though Bata already have a very detailed and elaborated working system, it is still hard to governance a large group of people outside of work. Tomáš believed that a worker's personal life also matters. He regarded the family unit as the fundamental element of forming a harmonious and efficient working community.² Therefore, company-provided accommodations were carefully designed to ensure residents have a quality life. At the same time, it became a vehicle for Bata to get involved in their employees' personal life.

“It would not be difficult to create a town with 50,000 people huddled in the barracks or tenement houses without caring as to how their wives and children are living and what opportunities for earning they have in the town. Our aim is to-built a garden town, fall of sunshine, water and green grass... It is our endeavor to free our women from the last traces of physical labour and help them to arrange their homes in which they may take pride.”

---- Tomáš Baťa, 1931³

Bata housings were mainly designed for a nuclear family, parents and children. In Tomáš' opinion, the best way to let a man settle was to help him group a family, which certainly needed another person's involvement --- a woman (under the historical context of the 20th century Zlín). The position of women in Bata was clearly defined to become the wife of a factory employee. Married women were not allowed to work in the factory and were given reason for having full attention to take care of their families. Bata provided them educational services to develop hobbies in art and music and clubs for social

1 Pokluda, 26.

2 Jane Parvitt, “The Bata Project: A Social and Industrial Experiment,” 36.

3 Ibid.

interaction.⁴ Special consideration was given to unmarried women. They were allowed to study at boarding schools and work in factories.⁵ The lifetime of a female in Zlín can be easily predicted. Therefore, the design of a house was important to a wife, as it was her main working domain. Female in a standard Bata society was not considered in terms of human right but viewed as an indispensable element in forming a basic social unit --- family.

However, switching to the male's perspective, they indeed were the targets of Tomáš' quote, "work collectively, live individually". Man's life was sharply divided into the working and living spheres. This traditional family structure put men into a breadwinner position as their wages became the household's primary income. It could potentially stimulate the enthusiasm for a job, create a competitive working environment, and build a new ethos for men. Svatopluk Jaburekd was born and raised, later worked and got married in Zlín, who described his life in Bata as "*it was just great.... even living in the company houses was extremely modern and nice*".⁶ Despite the fact that people may criticise the Bata system as a military wanted to control every aspect of their employees.⁷ The residents who like Jaburekd as one of the involved parties did not seem in that way. One possible reason could be that the traditional family structure corresponded to their visioning of an ideal life of a modern working man. Therefore, under the encouragement of Bata, young workers got married and were assigned to one of Bata provided houses.

3.2. Space for Individual and Collectives

The family houses were provided under the name of individual freedom. Although Bata holds the houses' ownership and complete use rights, the house did reveal a sense of individuality and independence through the design. There were three types of detached housing: single-family houses, duplex houses, and fourplex houses. As one of the most popular building types, duplex houses combined the advantages of collective buildings and single-family houses, made possible for each apartment to have a separate entrance, garden, and a separate path connected to the main roads. A standard duplex typically has two floors, sometimes with a basement in a proximate squared

4 Jaroslav Rudis, "It was Extremely Modern and Nice," in *A Utopia of Modernity: Zlín*, ed. Katrin Klingan (Berlin: Jovis, 2009), 138.

5 Ibid., 139.

6 Ibid.

7 Ibid.

footprint, measuring 8.1 x 9.4 meters in the examples, divided equally into two separate units [Figure 12].⁸ Each unit has about 70 square meters of space, with a living room, kitchen and bathroom on the ground floor and two bedrooms upstairs. The unit was designed in a rationalist way to meet everyday needs. The function of rooms was designated but given opportunities for individual furnishing. The interior of a unit did not differ much from a single-family house. The separating entrance of the unit created a visual illusion from the exterior that one owns the whole house [Figure 13]. Furthermore, the space around the house created a sense of distance. In a certain sense, this type of design did achieve the idea of living individually, but the

8 Klára Eliášová, “Duplex House,” Zlín Architecture Manual, aArchitektura, <https://zam.zlin.eu/en/object/23-duplex-house>

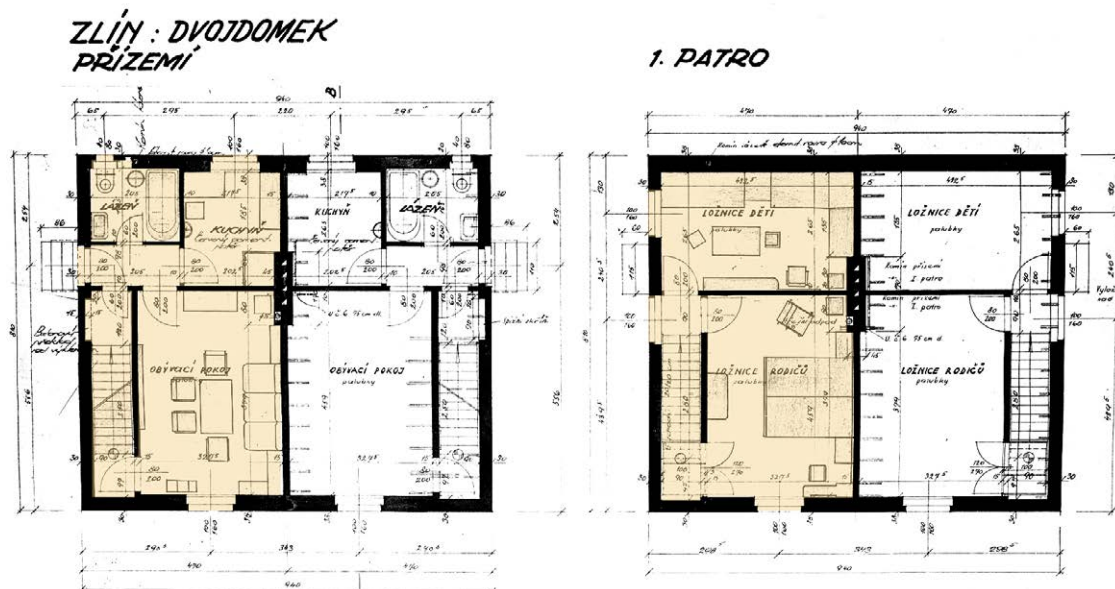


Figure 12.(above)
Typical floor plan for duplex houses.

Figure 13.(left)
Photo of a duplex house.

meaning of “individual” was defined by Bata systems.

Bata set different rules to avoid any further action of privatisation. For instance, the residents had non-ownership of the property and no right to make any structural modification to the house.⁹ Households had to adapt their way of living within the predefined unit layout, which assimilated the lifestyle of a large group of people. By doing so, a common collective life routine was created in both work and living. Bata ran the inspection system to ensure the family used their house properly. They tended to ask personal questions about the family, such as “what have you bought recently?” or “are you saving?”.¹⁰ Households were only allowed to live “freely” within Bata’s expectations. Prevention of individualised space was also found in the arrangement of houses. The house organisation forced the residents who live in the middle row to pass through the houses on neither side of the building [Figure 14]. The open spaces had undefined ownership to any household because of the irregular building situation [Figure 15]. They were read as semi-public spaces shared by surrounding houses, which one would feel a sense of responsibility. The notion of collective living was hidden among those detached houses. Bata’s principle about individual living had to be questioned because evidence showed that the created environment strongly interfered with personal living style.

9 Kubová, “Batovany/ Partizanske: A contribution to the Concept of the Functional City,” 260.

10 Ibid., 261.

Figure 14.

The arrangement of house in one residential block.

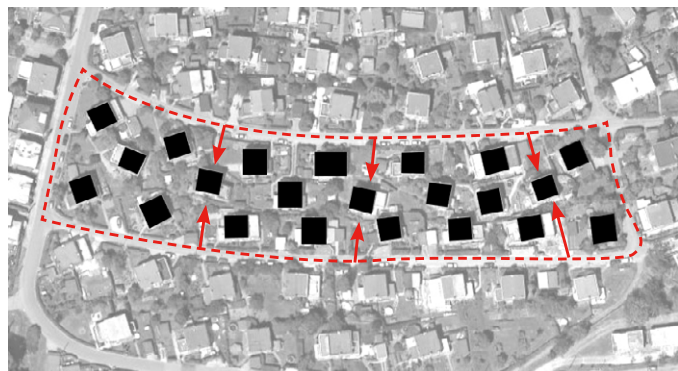
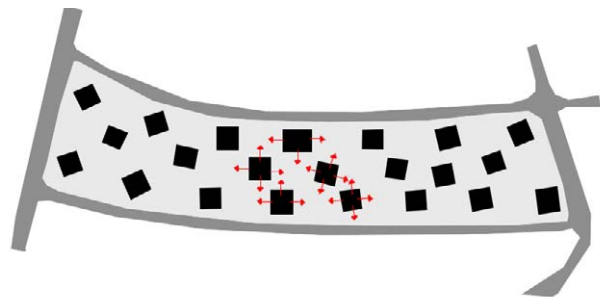


Figure 15.

Semi-public space in between the houses.



3.3 Massive Production in Housing

“The primordial instinct of every human being is to assure himself of a shelter. The various classes of workers in society today no longer have dwellings adapted to their needs: neither the artisan nor the intellectual. It is a question of building which is at the root of social unrest of today: architecture or revolution.”

----- Le Corbusier, 1923¹¹

From Le Corbusier’s point of view on the “new sprits” of architecture, society should reconstitute through the idea of mass-produced housing --- an adaptation of modern technology and strategy in architecture. As the result of factory production in architecture, units can be readapted without any alteration. Common values on mass production in architecture can be found in Bata planning. The demand for accommodation became a crucial factor in the future development of Bata, as the growth of factory output directly relates to the number of workers. Therefore, this industrialisation in architecture seems like a rational solution for Bata. The zoning plan of Zlín, submitted by Le Corbusier in 1935, proposed a replacement of small residential housing with the apartment buildings, ending the tradition of one’s own a plot and introducing a combination of individual privacy with a collective public [Figure 16].¹² However, Bata rejected his proposal because it conflicted with Bata’s principle of living individually.¹³ Nevertheless, the hundreds of company housings resulted from this massive production thinking in architecture, which demonstrated many advanced architectural innovations in design, material and construction.

Repeatability as the virtue of industry was adopted in architectural design language. Designing a prototype for residential housing implemented in Bata allowed duplication for construction. The inventions of single-family houses, duplex houses, and fourplex houses provided options with different price ranges and sizes. The most common residential type in Zlín was the duplex house, which accounted for 71% of total housing.¹⁴ A housing prototype defined the fundamental elements of structure, space, and function. The duplex house was firstly designed by Gahura and published by the company’s design department.¹⁵ Later, this type was further developed by Antonín Vitek, Adolf

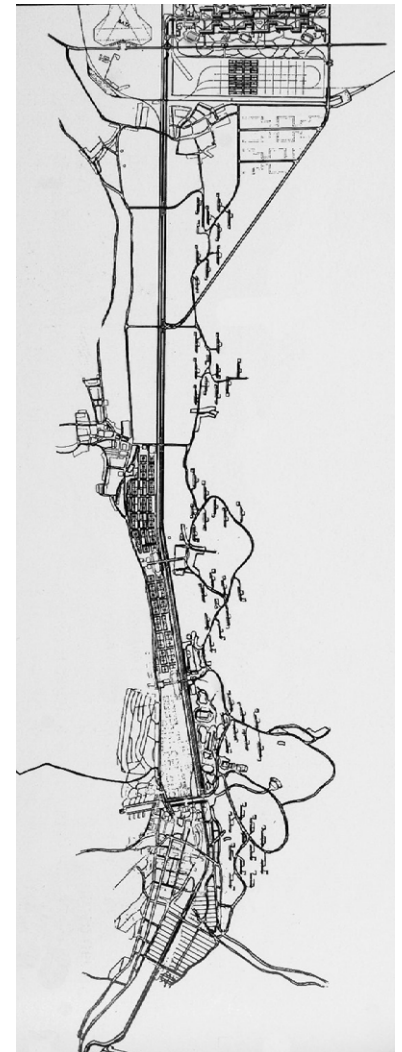


Figure 16.
Zoning plan for Bata company,
Le Corbusier, 1935

- 11 Le Corbusier, *Towards a New Architecture*, (New York: Dover Publications, 1986), 269.
- 12 Karin Wilhelm, “The Earth, A Good Domicile: Ambivalences of the Modern City,” 234.
- 13 *Ibid.*, 235.
- 14 Klára Eliášová, “Duplex House.”
- 15 Šlapeta, *Bata: Architecture and Urbanism 1910- 1950*, 66.

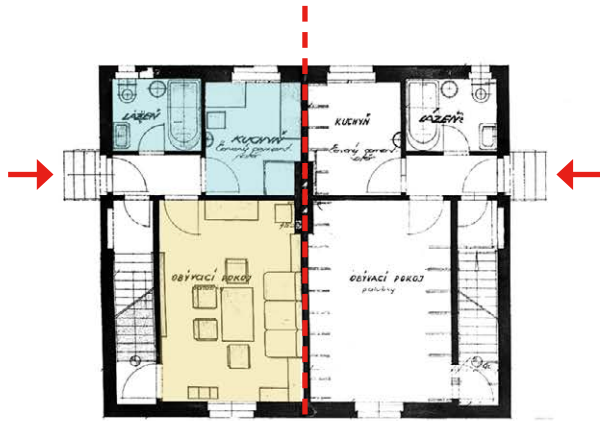
Benš and František Jech during a housing competition held by Bata in 1935 [Figure 17].¹⁶ By comparing the different versions of the duplex plan, shared commons could be found in the plan, symmetry in plans, particular origination between the service area and living area, façade as a support structure, similarity in area and proportion, and specific orientation of entrance and opening. Such common points reflected the keynote of this housing type, later transferred into a formula design solution.

The use of materials was unified for all kinds of Bata architecture, from public to private, from high-rise to low rise, building up the nature of the company town. Bata housings were mainly constructed with bricks. As mentioned in *Chapter 1.3*, the choice of material strongly correlates with the economy and technology. At the design level, the process of thinking became easier and more foolproof with this versatile and resisting material. From the construction point of view, brick as prefabricated material helped reduce the construction time on site. Although brick construction required skilful workers, it was still considered a traditional construction method in architectural history. The unification of material was an important decision been made in architectural industrialisation as it simplified the construction process and methods.

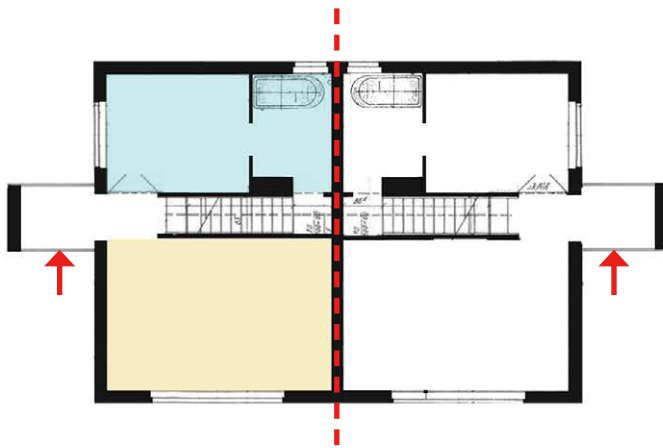
Efficiency in construction was determined by constructional time. The same logic in shoe production was also applied here. Manufacturing processes can be broken down into multiple stages and assigned to a different groups of people requiring little skill. The assembly team was formed in the construction department. Tomáš hired a team of builders to build a duplex house, as a result, they finished in two weeks, working ten hours a day until late at night.¹⁷ Completing a house in such a short time was impressive, even compared with the modern construction nowadays. The value of time was appreciated in Zlín, which led to the success of massive production in architecture.

16 Šlapeta, *Bata: Architecture and Urbanism 1910- 1950*, 66.

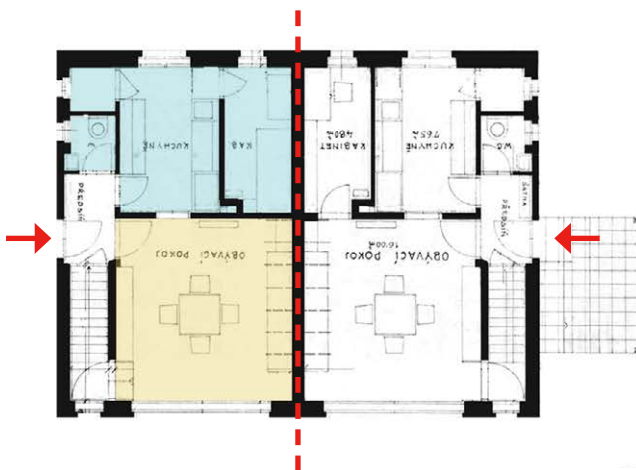
17 *Ibid.*, 9.



Typical Duplex House



Duplex House designed by Antonín Víttek



Duplex House designed by Adolf Benš and František Jech



Figure 17.
Zoning plan for Bata company,
Le Corbusier, 1935

Conclusion

Overlooking the first 50 years of Bata development, the company presented to the world a rigorous, well-structured management system that can be applied in different dimensions, from economy to technology, from ideology to sociology, and from urban planning to architecture. The idea of industrialization hugely impacted the structure of Bata. Tomas interpreted this idea further with his vision and formed shared values between Bata and the employees. The two main points in Tomáš' industrial thinking, technology and economy, were embodied in three aspects of Bata company: business value, construction, and social ideology. The business value of Bata could be reflected through its products, as plain and affordable. The notion of improving the quality of living products for everyone was concluded under the action of massive production. Additionally, technology development also brought up the constructional capability and efficiency of urban infrastructure, improving the living environment. Tomáš' social ideology was also implemented in the office hierarchy and collective working environment. The value of time was emphasized during the work to improve production efficiency.

The number of workers was the primary effector of the development of Bata. In order to attract people, material civilization was established based on Bata principles and used as a vehicle for propaganda. Living supplies, food, money, and most importantly, dwellings were ensured during the period of chaos. Along with like-minded employees, the company intended to form a healthy community with family spirits. Tomáš' visions of living environment and social structure mapped out the long-term urban strategy at Zlín. A worker's colony was essentially built to create a freer society, a better living environment, and a higher economic capacity. The situation of the railway determined the linear urban settlement for Zlín. The specific zone system clearly defined the urban environment and architectural quality based

on its function, creating logic and organized spatial atmospheres for the residents. Furthermore, Bata provided all kinds of open spaces and public facilities to satisfy the needs for entertainment, and enhanced the company's control over the employees outside of work. With the help of urban planning, a sense of community and collective consciousness were established at Zlín. Based on the urban study of Zlín, an ideal society of Tomáš was realized step by step throughout the urban development. The creation of different urban environments gradually affected individual behaviour and social structure.

If this collective thinking influenced the planning of Zlín, it was the pressure of providing private lifestyles that led to building faster and cheaper accommodation for the workers and their families. The division of jobs not only happened in factory production but also to a family. Men and women were assigned to different work based on their gender to function in this basic social unit. Here, men responded for working outside, and women were responsible for taking care of the family. People were not given many options in a Bata society but a relevantly quality life. It was the choice made by the workers. The appearance of different kinds of family houses was to sustain the idea of family in Bata society, which reflected the intervention of Bata systems in individual's lives. The design and construction of the house carefully followed the principle of massive production, standardized production and a highly rational calculation of the cost.

Throughout the history of Bata development at Zlín, it tells a story of how the concept of industrialization affects social ideology and penetrates the field of architecture and urban planning, creating a self-sustained and vibrant company town. The development of technology generates many advanced ideas and methods in architectural designs and constructions, reflecting the power of technology in relationship with architecture. The case study demonstrates how planners and architects use architecture and urban space as a vehicle to create a society in vision.

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