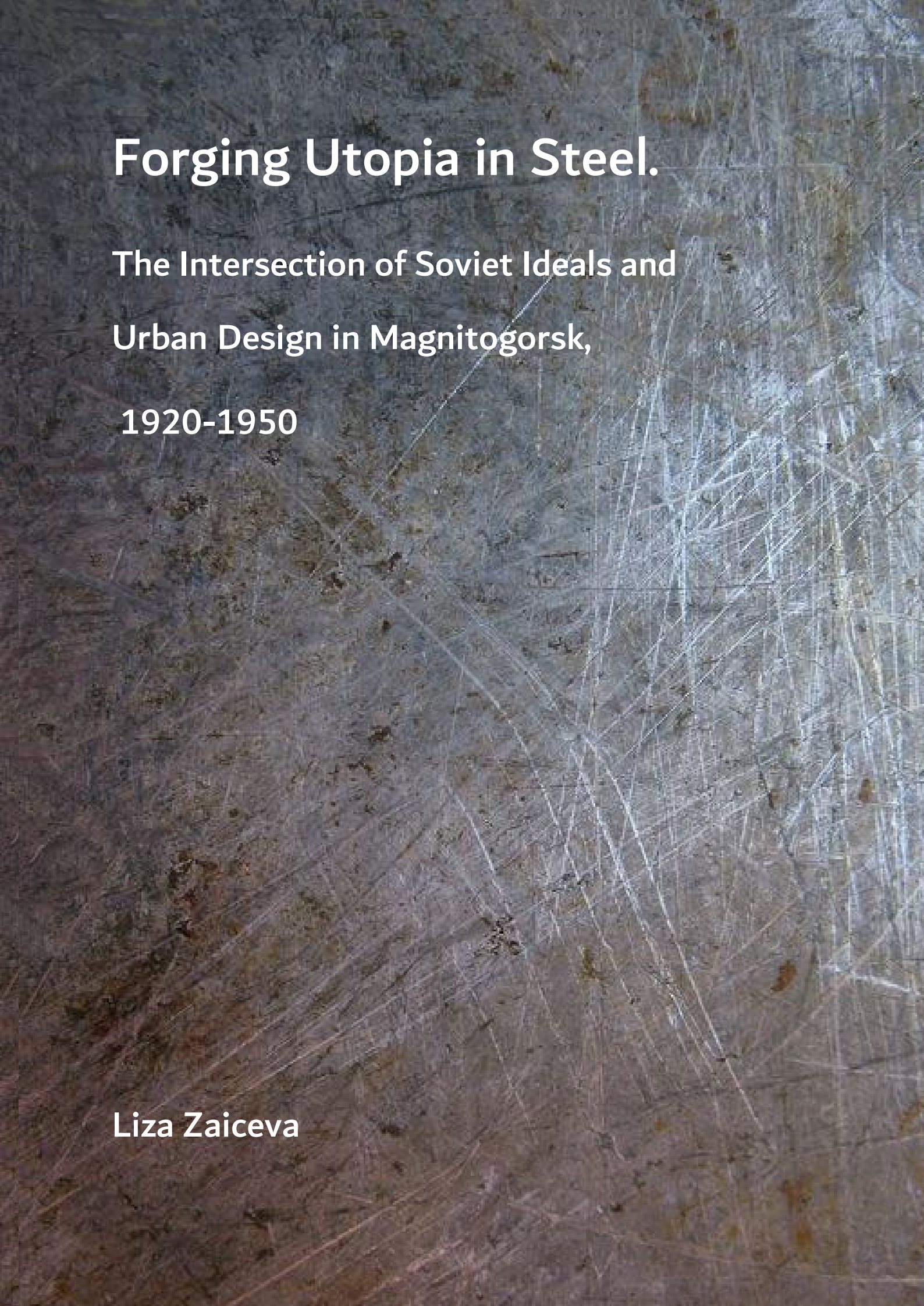

# Forging Utopia in Steel.

## The Intersection of Soviet Ideals and Urban Design in Magnitogorsk, 1920-1950

Liza Zaiceva

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## Abstract

This thesis explores the intersection between Soviet ideals and their manifestation in the urban planning of utopian projects, with a focus on Magnitogorsk—a city emblematic of the Soviet Union's quest to materialize its revolutionary dreams into concrete reality. Soviet ambitions in urban planning were often characterized as overreaching, with numerous visionary projects remaining unrealized due to their impracticality. Yet, these unrealized plans have left a significant mark on global urbanism, offering insights into the aspirations and ideological dogmas of the seized-to-exist state. This study examines the defining characteristics and principles of socialism as applied to urban design, delving into the common belief that sought to reshape cities in accordance with collectivist and egalitarian doctrines.

Moreover, the thesis investigates the influence of major Western urban models—namely the Garden City, the Linear City, and the Radial City—on the planning of Magnitogorsk, revealing a complex synthesis of foreign concepts with Soviet visions. This research uncovers how these Western models were adapted, adopted, or transformed to align with the Soviet ideology, thereby contributing to the creation of the Soviet dream city - at least on paper. The overarching question it addresses is: How Western models facilitate the embodiment of Soviet ideals in the urban plans of Magnitogorsk, and what does this synthesis reveal about the pursuit of the Soviet utopian city?

# Introduction

The urban landscape serves not only as a mirror reflecting the socio-political spirit of its time but also as a canvas upon which visions of the future are projected and materialized. In the heart of the 20th century, the Soviet Union embarked on an ambitious experiment, seeking to redefine urban space within the framework of emerging socialist ideals. This thesis reviews the formation of Magnitogorsk during the crucial period of 1920-1950, a time marked by strong ideological shifts and significant urban developments. It examines how Soviet communist ideology was woven into the principles of urban planning, simultaneously assessing Western design models through the prism of socialism.

The three Western urban models—the Linear City, the Garden City, and the Radial City—were not inherently socialist in conception; rather, they contained principles that resonated with some aspects of communist ideology. The study seeks to unravel how the foundational structures of these Western models were reinterpreted and integrated into the Soviet vision of urban planning in an attempt to create remarkable and unique urban projects.

The analysis primarily is centered around the deliberate alterations, made by soviet western architects, to Western planning models to accommodate the ethos of socialism across different phases of city development. Magnitogorsk, sculpted from the ground up, stands as a testament to the Soviet vision of industrial city-centered development. Its strategic position by the Ural mountains at the continental crossroads enhances its significance, offering a rich context for this case study of industrial and socialist urban synergy (Kotkin, 1995; Scott, 1998).

Through the study of the proposed master plans on Magnitogorsk, this paper aims to illuminate the evolution of socialist urban ideals and their manifestation in concrete forms. Central to this inquiry is the research question: How did the adaptation of the three Western models—the Garden City, Linear City, and Radial City—facilitate the embodiment of Soviet ideals in the urban plans of Magnitogorsk, and what does this synthesis reveal about the pursuit of the Soviet utopian city? The insights garnered from this investigation not only enhance our understanding of the Soviet urban experiment, but also contribute to the broader discourse on the relationship between ideology and urbanism.

# Chapter 1: Overview of Soviet Communist Ideology Principles in Urban Planning

At the dawn of the 20th century humanity found itself in an era of profound ideological shifts, prominently marked by the ascendance of socialism in various parts of the world. Yet, the interpretation and implementation of socialism took divergent paths, most notably contrasting between the Soviet Union and Western countries. This divergence is deeply rooted in the distinct historical, social, and economic contexts within which each variant of socialism evolved. In the Soviet Union, socialism was not merely a political or economic theory; it was a comprehensive ideology that sought to govern every aspect of human life, reshaping society according to the principles of equality, communal living, and a centralized economy - that idealistically attempted to create “a better world for everyone”. This form of socialism, often referred to as Soviet socialism or Marxism-Leninism, starkly differed from Western socialism, which generally advocated for social reforms within the framework of a capitalist economy, emphasizing welfare, labour rights, and democratic governance, but without fundamentally challenging the capitalist mode of production. (Grinin, Grinin, & Korotayev, 2022)

The exploration of the key principles of Soviet socialism is crucial to understanding the Soviet approach to urban planning. Unlike in the West, where urban planning often aimed to address specific social and economic issues within the existing capitalist structure, Soviet urban planning was envisioned as a tool for the radical transformation of society. It was an over-ambitious attempt to materialize the communist utopia, to create cities that would not only embody the ideals of socialism but also actively foster the development of the socialist human being. This approach to urban planning was founded on top of a belief in the possibility of engineering a new social reality through the manipulation of spatial environments.

## 1.1. Definition and Key Principles of Soviet Communism Ideology

Soviet communism, as a political and economic ideology, sought to create a classless society governed by the principle of "from each according to his ability, to each according to his needs." At the heart of Soviet communism were the ideas of eliminating private property, ensuring public ownership of the means of production, and eradicating social and economic inequalities. These foundational principles were aimed at fostering a society where the welfare of the community prevailed over individual interests, leading to the ultimate goal of achieving a communist utopia. (*Communism: Karl Marx to Joseph Stalin | CES at UNC*, n.d.)

The key principles of Soviet communism ideology that directly influenced urban planning included:

- Classlessness: The abolition of class distinctions was considered to be the central base for creating an environment where all individuals had equal access to resources, opportunities, and amenities.
- Collectivism: Emphasizing the collective over the individual, collectivism in urban planning was manifested in the creation of communal living spaces, shared amenities, and public services designed to reinforce social bonds and communal life.
- State Planning: The state's central role in planning and controlling the economy extended to urban development, where land use, housing, and industrial placement were meticulously planned to align with socialist goals.
- Integration of Industrial and Agricultural Sectors: Reflecting Marx and Engels' vision, Soviet urban planning aimed to diminish the rural-urban divide by integrating industrial production with agricultural activities, promoting self-sustaining communities.
- Emphasis on Social Welfare: Urban planning under Soviet communism prioritized social welfare objectives, including the provision of affordable housing, healthcare, and education, ensuring these services were universally accessible. (Harris, 2013).

Through wealth redistribution (present and expected) and dictated equalization, socialist philosophers and politicians expected to arrive at a more homogeneous and overachieving society.

## 1.2. Examination of the Principles Translation into Urban Planning Concepts

The translation of Soviet communist ideology into urban planning concepts can be observed in the ambitious (and overarching at times attempts) to design and construct cities that would embody the ideological goals of communism. This section explores how the key principles of Soviet communism, mentioned in the previous subsection, were applied to urban planning.

### Classlessness and Urban Form

Soviet urban design was fundamentally aimed at obliterating class distinctions through spatial organization. Planners crafted urban landscapes where disparities in housing quality and access to amenities were minimized, in opposition to capitalist cities where central locations often denote wealth and higher social standing (Gutnov et al., 1971). This egalitarian approach to urban planning was a direct embodiment of Marxist ideologies, advocating for a society where spatial arrangements did not mirror social stratifications but fostered

uniformity and solidarity among the populace. By ensuring a balanced distribution of living standards across the cityscape, Soviet urbanism sought to physically manifest the principle of classlessness, challenging the normative divides seen in capitalist urban forms (Fisher, 1962). The strategic layout of Soviet cities was thus not only a matter of urban development but also an ideological statement, striving to create environments that epitomized the communist vision of a classless society.

## Collectivism in Living Spaces

In the framework of Soviet urban planning, the principle of collectivism was woven into the fabric of living spaces, aligning closely with the ideological principles emphasized by Alekseyeva (2019) and Kopp (1970). This was vividly manifested in the communal housing models, or "kommunalkas," where the traditional boundaries of individual family units were extrapolated to collective living quarters. These spaces, far from being mere architectural features, were expected to become ideologically charged environments designed to foster a sense of community, solidarity, and shared responsibility among inhabitants (Alekseyeva, 2019). Additionally, the extensive integration of public spaces such as parks, community centers, and cultural institutions into the urban landscape aided in facilitating social interaction and reinforcing the celebrated collective spirit (Kopp, 1970). The strategic organization of these communal and public spaces was not arbitrary but reflected a deliberate effort to embody Marxist-Leninist principles in the physical and social layout of Soviet cities, promoting an egalitarian lifestyle contrary to the individualistic orientation of Western urban planning models. This approach was expected to highlight the Soviet commitment to a social welfare system, prioritizing access to housing, healthcare, and education, ensuring these were universally accessible and not contingent on individual economic capacity (Alekseyeva, 2019; Kopp, 1970). Many of the core socialist ideals required maximalist approach, naturally leading to a vast number of utopian projects, stretching far beyond areas of urban planning and architecture.

## State Planning and Urban Development

State Planning and Urban Development under Communism, particularly within the Soviet Union, was characterized by a dominant central government role, which ruled the spatial and structural aspects of urban environments. This centralized planning approach was integral to the Soviet regime's broader strategy to fuse urban growth with overarching economic and socialist objectives (Scott, 1998).

The placement of industrial facilities, for example, was carefully considered to ensure proximity to residential areas, aiming to minimize commute times and enhance the quality of life for workers. This strategic layout was supposed to

lead to more efficient production processes and foster a more cohesive community structure (Kotkin, 1995). However, this often resulted in the rigid imposition of industrial priorities at the expense of residential comfort, leading to environments that prioritized functional over livable spaces.

Moreover, the integration of essential public services—healthcare, education, and recreational facilities—into the urban structure was meant to ensure that these services supported the state's goals of social welfare and egalitarian access (Harris, 2013). Yet, the execution sometimes fell short of these goals, with services unevenly distributed and resources often inadequate to meet the demands of a rapidly growing urban population.

The Soviet commitment to state-led urban planning was aimed at advancing industrialization and social welfare. Nonetheless, critics argue that the top-down approach limited local innovation and responsiveness, often resulting in urban spaces that were more reflective of state desires than of the needs of the inhabitants (Scott, 1998)

## Integrating Industry and Agriculture

The integration of industry and agriculture was a critical component of Soviet urban planning, directly aligning with Marx and Engels' vision of reducing the rural-urban divide (Marx & Engels, 1848). This strategy involved the creation of agro-industrial complexes and the fostering of small cities that simultaneously supported industrial facilities and agricultural land use. These developments were intended to cultivate self-sufficient communities, minimizing economic inefficiencies and enhancing the symbiotic relationship between urban dwellers and their agrarian surroundings (Scott, 1998).

This approach also aimed to mitigate the social antagonism, often observed in capitalist systems by fostering a more cohesive societal structure. However, despite its ideological appeal, the practical implementation of this integration frequently encountered challenges, including logistical issues and the balancing of industrial and agricultural productivity, which sometimes compromised the intended harmony and efficiency (Kotkin, 1995).

## Prioritizing Social Welfare

The commitment to social welfare was a driving force behind Soviet urban planning. This principle was evident in the efforts to ensure access to quality housing, healthcare, and education. Housing projects were designed to be affordable and accessible, counteracting the housing crises of earlier eras and providing secure living conditions for all citizens. Healthcare facilities were distributed throughout urban areas, ensuring that medical services were readily available. Education was similarly prioritized, with schools and other educational

institutions integrated into community planning. These initiatives reflected the Soviet dedication to improving living standards and advancing social equality, embodying the ideological commitment to the welfare of the entire population - as the acceptable living standard was one of the cornerstones of the ideology.

Thus, a theoretical groundwork, laid out in this chapter, is to be used further for establishing a comprehensive understanding of the ideological motivations behind utopian urban planning, as well as providing comparative criteria, upon which further conclusions on Soviet urban planning achievements can be drawn. The divergent paths taken to realize utopian cities, as exemplified by the clear differences between the Soviet Union's Marxist-Leninist-influenced urban planning and the approaches found in Western contexts under the influence of democratic socialism, highlight the breadth of socialism's application to urban development. This variance illuminates many attempts to materialize socialist ideals in physical spaces, each influenced by its unique socio-political and historical context.

# Chapter 2. Analysis of Design Models Borrowed from Western Practices

As we transition from the ideological framework to the practical implementation of these ideals, Chapter 2 presents a critical analysis of the interaction between Soviet urban planning and Western design models. This juxtaposition not only highlights the specific Soviet approach to city planning but also underscores the broader narrative of urban development within the 20th century. The chapter embarks on an exploration of design models such as the Garden City, Linear City, and Radiant City, which, originating from the West, encapsulated utopian visions of urban living that transcended conventional boundaries and challenged existing paradigms.

## 2.1 Garden City

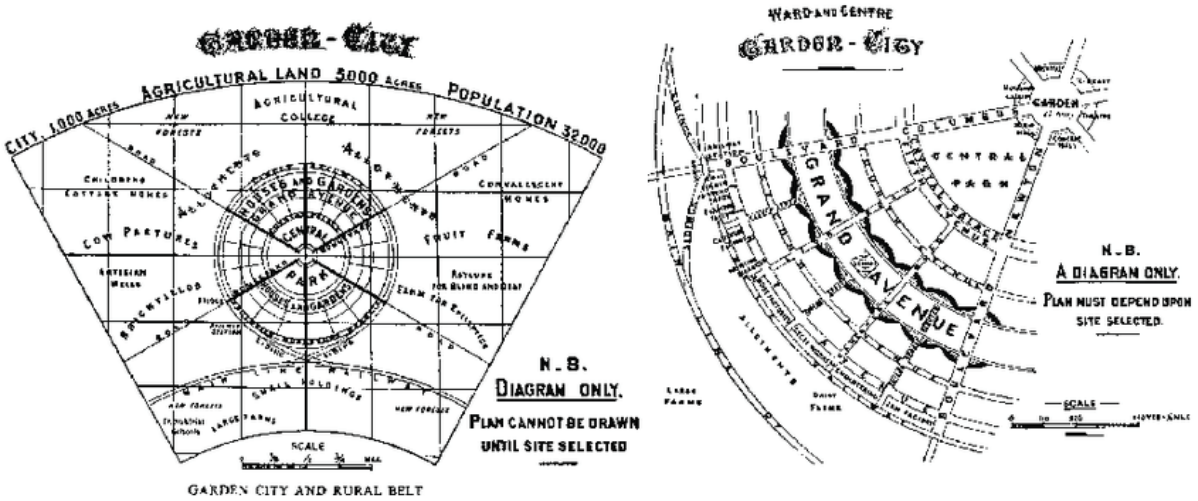


*Figure 1 (Ebenezer Howard, 1987)*

**Historical Background**

The Garden City model, conceived by Ebenezer Howard in the late 19th century, emerged as a revolutionary urban planning concept aimed at resolving the growing industrial urbanization's social and environmental problems. Howard's vision was a response to the detrimental living conditions in British cities at the height of the Industrial Revolution, characterized by overcrowding, pollution, and poor public health. His ideas were detailed in his seminal work, "Garden Cities of To-morrow" (1898), where he proposed the creation of self-contained, planned communities that would harmonize the benefits of the countryside with the economic and social advantages of the city (Howard, 1898).

**Main Principles**

The core principles of the Garden City model are centered around balancing urban and rural elements to create sustainable and healthy communities. The model advocates for limited population size, the integration of green spaces, and self-sufficiency in terms of employment and agriculture. A defining feature is the concept of a "green belt," surrounding each city to prevent urban sprawl and maintain a close relationship with nature. Howard envisioned these cities as part of a larger network, connected by road and rail but each maintaining its distinct identity and autonomy. This approach aimed to distribute populations and industries more evenly across the landscape, reducing the pressures on large urban centers and improving overall quality of life.

**Critical examination**

The Garden City model's strengths lie in its visionary approach to combining the best aspects of urban and rural living, promoting environmental sustainability, and fostering community cohesion. Its emphasis on green spaces and controlled urban growth often does not align with the industrial growth of cities and often turn out unfeasible in the context of capitalist cities, underlining its relevance in today's increasingly urbanized world. Criticisms of the Garden City model often point to its utopian nature and the challenges associated with implementing such comprehensive planning in reality. Critics argued that the model requires significant initial investment and strong governance to guide development according to Howard’s principles, factors that can be barriers to its practical application (Hall & Ward, 1998).

**Relation to Socialism**

Concerning socialism, Garden City shares some of the ideological foundations, particularly in its critique of capitalist urban development and its emphasis on community welfare and environmental sustainability. However, Howard’s model stops short of advocating for the collective ownership of land or production means, central to socialist thought. Instead, it proposes a cooperative model where benefits are shared among residents. This aspect has led to debates on whether the Garden City can be considered truly socialist or merely a reformist approach to capitalist urbanization.

Critical literature, such as Peter Hall and Colin Ward's "Sociable Cities: The Legacy of Ebenezer Howard" (1998), provides a nuanced view of the Garden City model's impact and limitations, suggesting that while Howard's vision offers valuable lessons, its full realization remains constrained by economic, social, and political realities.

## 2.2. Linear City

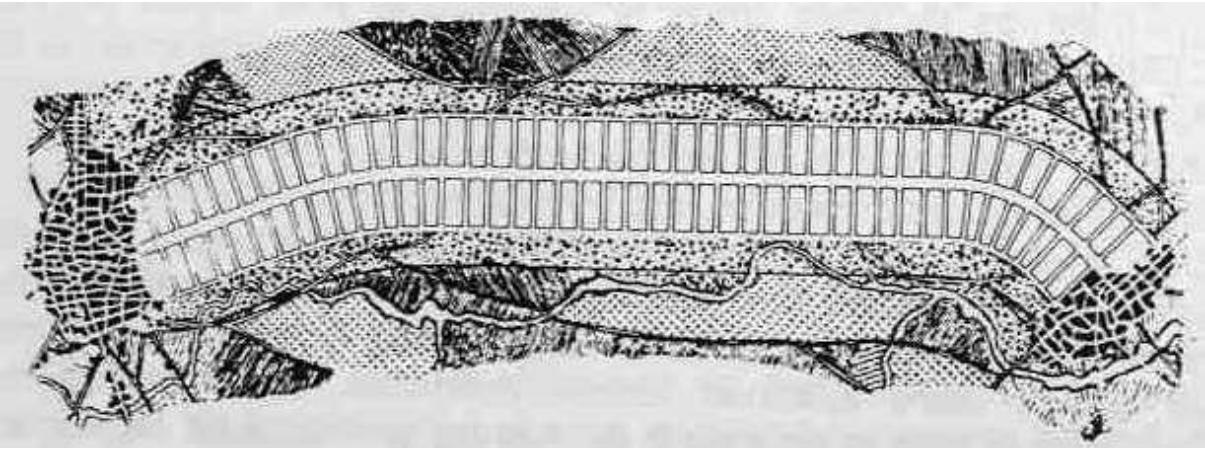

*Figure 2 The concept of Arturo Soria's linear city.(1882)*

**Historical Background**

The concept of the Linear City was introduced by Spanish urban planner Arturo Soria y Mata in the late 19th century as an innovative approach to urban development. Soria y Mata envisioned a city extending along a linear axis, typically following major transportation routes, aiming to combine the advantages of urban and rural living while avoiding the pitfalls of traditional, densely populated urban centers. His ideas were a direct response to the chaotic urban expansion of the industrial era, proposing a model that sought to streamline urban growth and enhance living conditions by systematically organizing residential, industrial, and commercial zones along a continuous line (Soria y Mata, 1894).

**Main Principles**

The Linear City model is founded on several key principles that seek to redefine urban space organization. The primary principle is the linear arrangement of the city, which tries to facilitate efficient transportation and communication along its length, reducing transit times and congestion. This configuration allows for a clear separation of zones, with residential areas positioned for optimal access to natural light and ventilation, and industrial zones strategically placed to minimize their impact on living areas. Another crucial aspect is the incorporation of green spaces, which are integrated throughout the linear city, providing residents with accessible natural environments. This model emphasizes scalability, allowing the city to expand by extending its linear axis, thus supporting sustainable growth without sacrificing urban density or quality of life.

**Critical Examination**

The Linear City model offers several advantages, including improved urban mobility, effective zoning, and enhanced access to green spaces, aligning with contemporary values of sustainable and efficient urban planning. Its linear structure is praised for the potential to optimize public transportation systems and reduce the environmental footprint of urban development. However, the model also faces criticism, particularly concerning its scalability and the risk of excessive elongation, which could eventually lead to inefficiencies in transportation and service delivery over extended distances. Additionally, the strict zoning and separation could potentially hinder the organic development of multifunctional urban areas and the vibrant mix of uses that characterize dynamic city life.

**Relation to Socialism**

From a socialist perspective, the Linear City model presents an interesting case. Its emphasis on planned growth and equitable access to urban amenities echoes socialist principles of equality and collective welfare. However, its original conception by Soria y Mata does not explicitly address the social ownership of land or production means. Critics argue that while the model offers a framework for more egalitarian urban development, its implementation within capitalist or socialist systems would significantly influence its alignment with socialist ideals.

Scholarly critiques, such as those found in urban studies literature, highlight the innovative yet challenging aspects of the Linear City model. These critiques underscore the need for flexible urban planning approaches that can adapt to changing societal needs and technological advancements while retaining the model's core benefits.

## 2.3. Radiant City

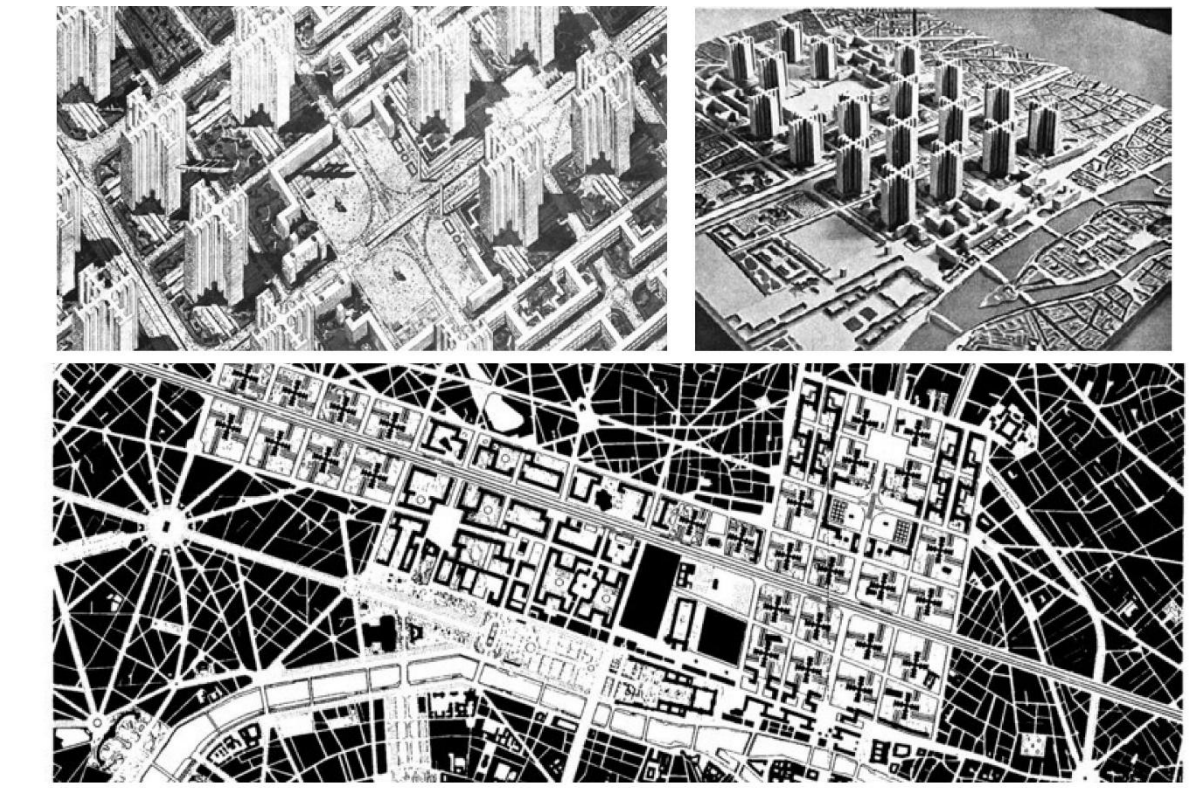


*Figure 3 The Radiant City (1924)*

### Historical Background

The Radiant City (La Ville Radieuse) was conceived by the Swiss-French architect Le Corbusier in the early 20th century, marking a radical departure from traditional urban layouts to embrace modernist principles. Le Corbusier introduced this concept in the 1930s, aiming to create an ideal urban environment that harmonized living spaces with the inhabitants' needs for sunlight, space, and greenery. His vision was a response to the overcrowded and unsanitary conditions of European cities, proposing a utopian solution that prioritized human well-being and efficient city planning (Le Corbusier, 1935).

### Main Principles

The main principles of the Radiant City revolve around the idea of a vertically organized city, with skyscrapers surrounded by extensive green spaces to ensure that every inhabitant has access to natural light and air. The model emphasizes the separation of functions, with distinct zones for living, working, recreation, and transportation. Le Corbusier envisioned the extensive use of modern materials and construction techniques to create large, standardized, and

versatile living units. Another critical principle is the strict regulation of traffic, with the proposal of separate pathways for pedestrians and vehicles, aiming to enhance safety and urban mobility. The Radiant City model seeks to foster a sense of community through shared public spaces and facilities, while also ensuring privacy and individuality within the residential units.

**Critical Examination**

The Radiant City model has been celebrated for its visionary approach to urban planning, advocating for a living environment that caters to human health and happiness. Its principles have influenced numerous urban development projects and policies worldwide, emphasizing the importance of green spaces and pedestrian-friendly environments. However, the model has also faced criticism for its high degree of centralization and the potential for social isolation due to the segregation of functions and the emphasis on high-rise living. Critics argue that the model's top-down planning approach might overlook the organic development of urban areas and the complex needs of their diverse inhabitants (Fishman, 1977).

From a socialist perspective, the Radiant City presents a mixed alignment with socialist principles. While it advocates for improved living conditions for all, the model does not explicitly address issues of social equity in terms of access to resources and spaces. The emphasis on large-scale planning and the potential for state control over urban development resonate with some aspects of socialism, but the lack of focus on community ownership and participatory planning diverges from core socialist ideals.

Le Corbusier's "The Radiant City" (Le Corbusier, 1935) provides a detailed account of his urban vision, while Robert Fishman's critique in "Urban Utopias in the Twentieth Century" (Fishman, 1977) offers a critical perspective on the model's implications for urban living and its socio-political dimensions.

Chapter 2 of this thesis set out to explore the relationship between Western urban planning models and Soviet socialist principles, laying the groundwork for understanding their impact on the utopian visions of Magnitogorsk. While assessing how the Garden City, Linear City, and Radiant City models correlate with socialist ideologies, it was found that each model bears elements—such as community-centric design, integration of green spaces, and structured urban growth—that resonate with, yet diverge from, traditional Soviet urban planning approaches. These models, not originally crafted as complete socialist plans, echo principles that align with aspects of communist thought. They presented a conceptual framework that the Soviet Union could adapt and refine to suit its revolutionary aspirations, thereby influencing the urban canvas of Magnitogorsk. The insights from this analysis set the stage for a deeper investigation into how these models were reinterpreted within the absolute conditions of a communist regime.

# Chapter 3. Magnitogorsk's plans' analytical study.

## Introduction

Magnitogorsk was chosen as a case study for this chapter because it exemplifies the Soviet Union's ambitious integration of Western urban planning models with its socialist ideologies, creating a unique experimental site for examining the practical implementation of communist ideals from the beginning of its history.

Chapter 3 delves into the intricate development of Magnitogorsk from 1930 to 1950, a period that was transformative not only for this city but also emblematic of broader Soviet ambitions. This chapter will examine how urban planning models, particularly those adapted from Western concepts, were applied and modified in Magnitogorsk, reflecting the unique blend of Soviet ideals with practical urban development strategies.

Magnitogorsk's foundation in the early 1930s was part of a colossal Soviet initiative to catapult the USSR into industrial modernity. Conceived as both a symbol and an instrument of the new socialist order, Magnitogorsk was to be a model city that merged the latest urban planning ideas with the principles of socialism. The city's location at the edge of the Ural Mountains, rich in iron ore, was strategically chosen to facilitate the Soviet Union's steel production capabilities, crucial for its industrialization efforts (Kotkin, 1995).

The construction of Magnitogorsk was heavily influenced by the Soviet Union's First Five-Year Plan, which aimed at rapid industrialization. It attracted thousands of workers from across the Soviet Union, drawn by the promise of employment and the allure of participating in a grand socialist experiment. The city's urban layout initially drew inspiration from contemporary Western models, including the concepts of the Garden City, Linear City, and Radiant City. These models were seen not just as designs for physical spaces but as vehicles for social engineering, intended to forge a new Soviet citizenry, committed to the ideals of collectivism and socialism (Scott, 1998).

Throughout the 1930s and into the 1940s, Magnitogorsk's development mirrored the tumultuous shifts in Soviet policy, from the stark collectivism under Stalin to slight liberalizations post-World War II. The city's growth was marked by a persistent tension between ambitious urban planning and the harsh realities of Soviet life, including shortages and the challenges of the wartime economy. By 1950, Magnitogorsk had not only expanded significantly in size but had also become a crucial node in the Soviet industrial complex, its development

reflecting both the achievements and contradictions of Soviet planning (Harris, 2013).

This chapter will explore how the ideals of Soviet urban planning were manifested in Magnitogorsk's evolution, scrutinizing the interplay between imported urban models and indigenous Soviet conditions. This analysis will provide a deeper understanding of how Magnitogorsk embodies the complexities and aspirations of Soviet urban development during a pivotal era.

## 3.1 Linear City.

### Ivan Leonidov's and OSA's master plan.

Chapter 3, Part 1 of this thesis critically examines the ambitious Linear City project envisioned for Magnitogorsk by Ivan Leonidov and the OSA team in 1930. Leonidov, a key figure of Russian avant-garde and constructivism, along with his students from VHUTEMAS, sought to reimagine urban living in a manner that would align with the burgeoning socialist ideals of the time.

The plan proposed a city that eschewed the chaotic and cramped quarters of past urban forms, instead offering a linear sprawl designed to harmonize with the surrounding natural environment. Residential structures, imagined in glass and wood, were to be systematically arranged in a chessboard pattern along the city's length. Each residential complex, accommodating 250 residents, aimed to foster small collective units that maintained individuality within the greater community fabric. The project represented a radical departure from the existing urban norms, aspiring to a society where the balance between industrial might and pastoral tranquility was achieved (Tatlin.ru).

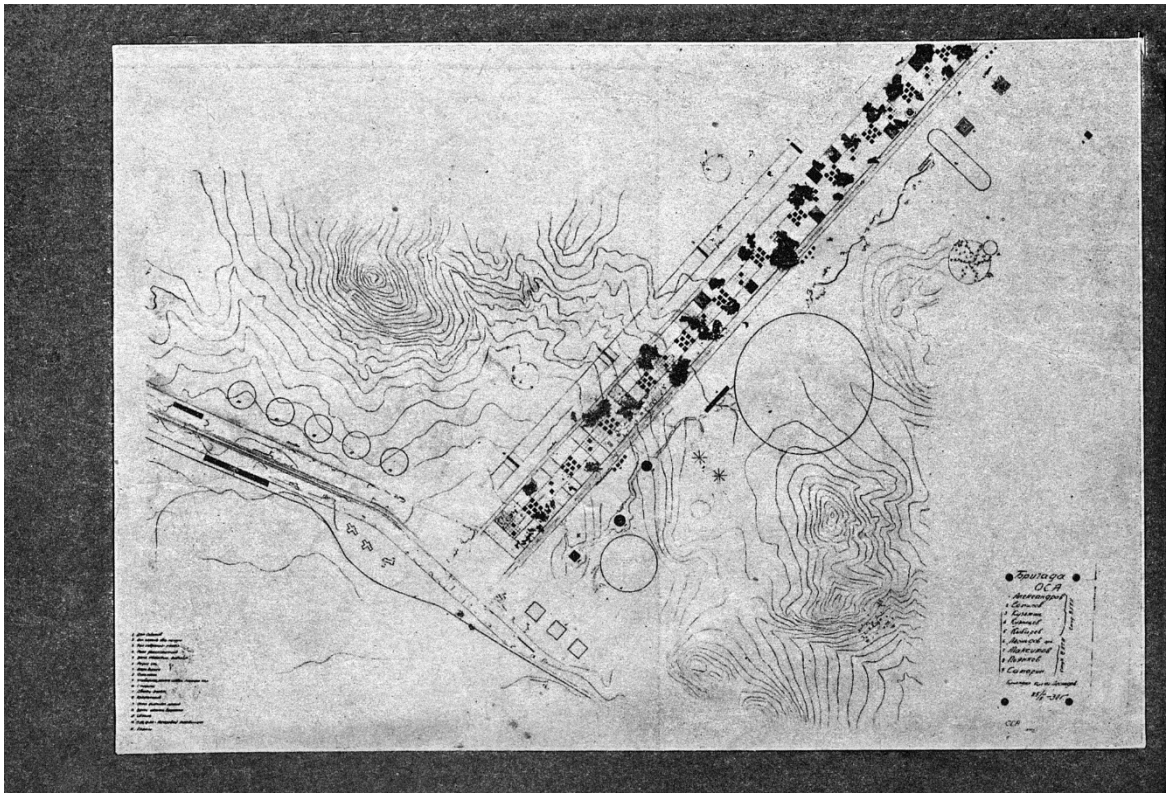

*Figure 4 General Plan (1930)*

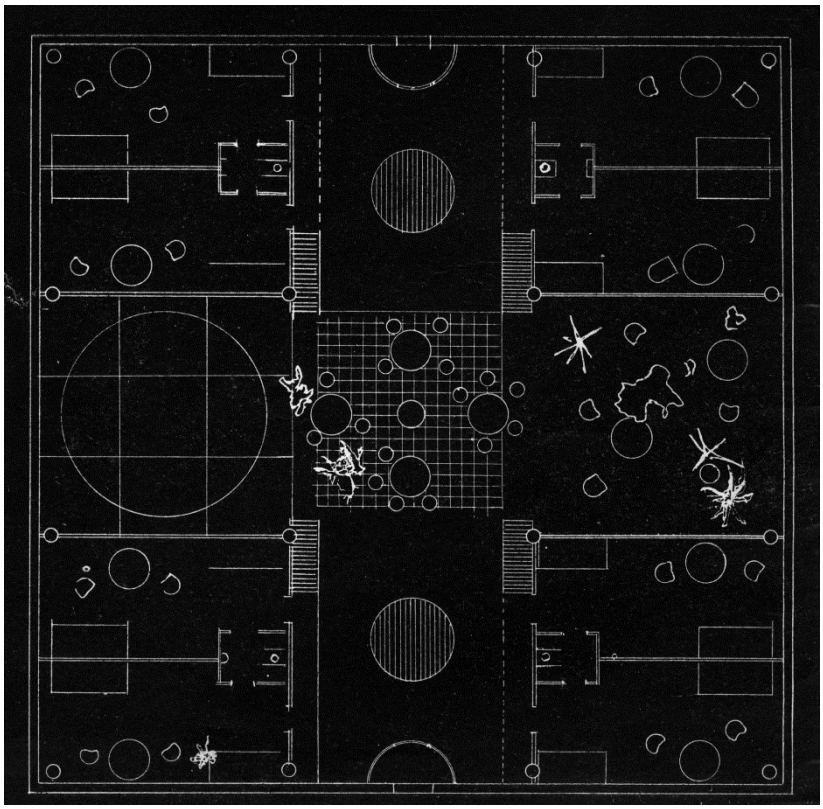

*Figure 5 Typical dwelling plan (1930)*

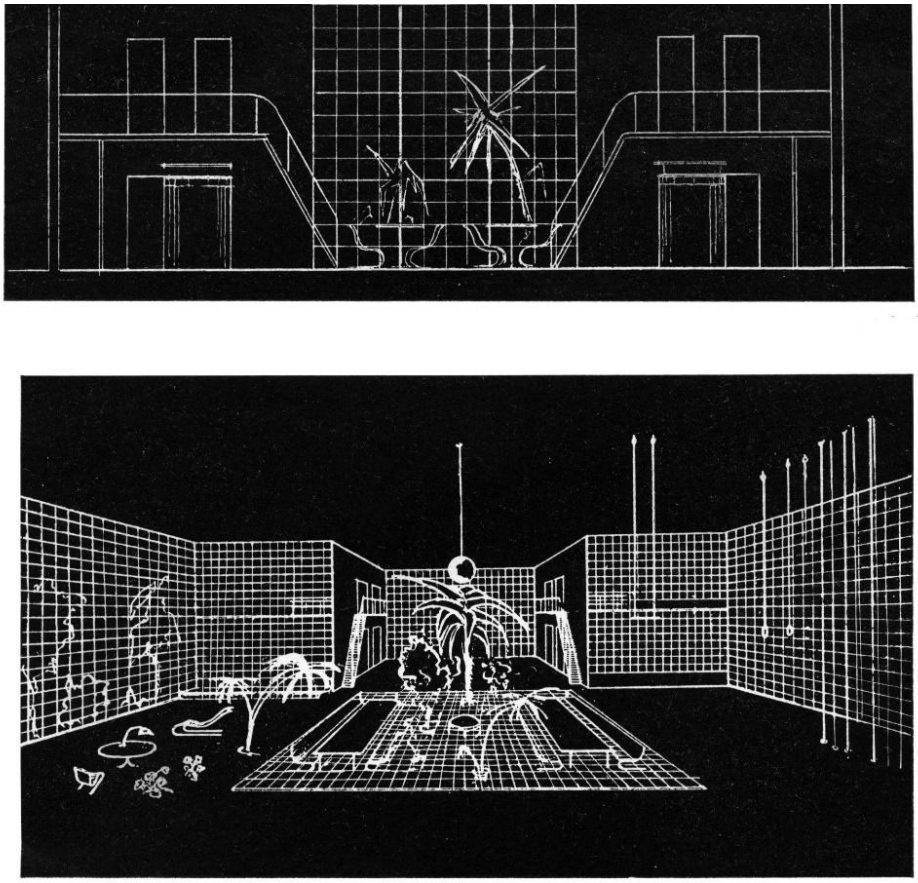

*Figure 6 Section and Interior (1930)*

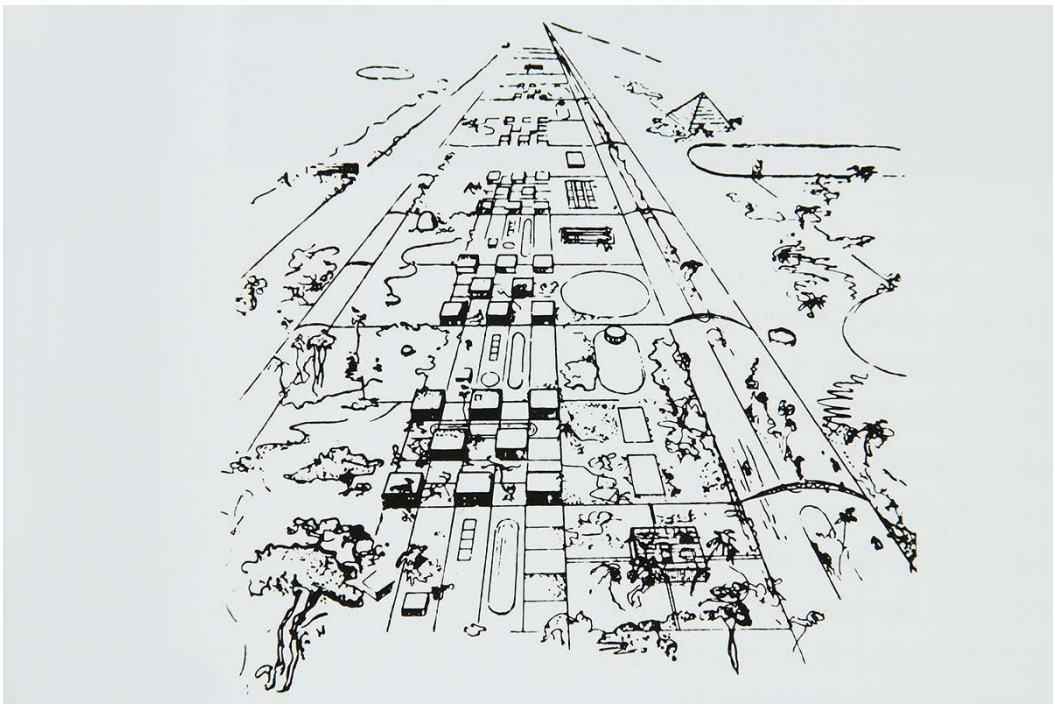

*Figure 7 Ivan Leonidov's Competition Proposal*

**Critical Examination:**

- Classlessness and Urban Form:

  Leonidov's linear design ostensibly supported a classless society, with uniform living conditions suggesting equality. Yet, the idealistic sameness might have lacked the capacity for organic growth, potentially leading to a monotonous cityscape that could fail to meet the diverse needs of its inhabitants.

- Collectivism in Living Spaces:

  The design's collectivist intentions were clear, with communal dining and living areas embedded in each residential complex. Leonidov's take on collective living is assumed to emphasize communal leisure over communal living. In such a case, people would only sleep in the dedicated living quarters, but other activities would involve larger group interactions - including eating together, spending free time, creating, etc.

- State Planning and Urban Development:

  The highly regimented nature of Leonidov's plan, indicative of state-led urban development, was ambitious in its scope. That ultimately means a dictated and rigid approach towards any future developments, aligned with the core doctrine of state-driven social development. A characteristic aspect of Leonidov's plan is that a linear city structure assumes an even more strict and style-locked approach towards any future urban developments - as any city expansion would need to precisely follow the pre-existing structure in order not to ruin the logic of the city plan. One might argue that, while such an approach may generate a well-organized structure in the short-term, long-term horizon developments, subject to unforeseen circumstances, leave such design in a rather fragile state.

- Integrating Industry and Agriculture:

  Leonidov envisioned a city that straddled the line between industrial vigour and agricultural bounty, yet the utopian synthesis of these spheres in a linear format could overlook the practical complexities of such integration. Leonidov, pursuing a rather radical approach towards how Soviet society should exist, attempted to maximize the efficiency of the proletarian population by minimizing the distances between living and industrial areas - mostly neglecting or underestimating the necessity of

extensive green zone, required for such heavy industry, present in Magnitogorsk. While green zones where assumed for recreation, those were not planned sufficiently for the support of any agriculture needs of the city.

- Prioritizing Social Welfare:

  The project promised ample green zones, sports facilities, and cultural venues, suggesting a strong emphasis on social welfare. Yet, the viability of these generous provisions in the face of Magnitogorsk location (logistical challenge) and purpose (primary focus on heavy industry) remains to be questionable. In other words, the practical aspect of the plan assumed a very high level of implementation, which was not necessarily achievable within the context of the time and place.

Combining idealistic design principles with realism, Leonidov's plan for Magnitogorsk under the Linear City model embodies the essence of Soviet ambition in urban planning—striving for a perfect equilibrium between human needs and socialist ideals. While the design demonstrates a high degree of commitment to collectivism, state control, and social welfare, it also raises critical questions about the attainability of such a meticulously planned vision. Most of Leonidov's ideas, while looking rather innovative and logical on paper, were rather idealistic and detached from practical matters. The Linear City project for Magnitogorsk remains a visionary blueprint; it is an exemplar of utopian design, yet one that elicits a critical reflection on the gulf between ambitious urban planning and the inherent unpredictability of societal development. (Tatlin.ru; "Linear City Model Magnitogorsk," 1930)

## Ernst May's Linear City Proposal 1931

Ernst May, a celebrated figure in the realm of urban planning, was part of the brigade that sought to imprint a Western vision onto the industrial and social landscape of Magnitogorsk. His proposal in 1930 followed Ivan Leonidov's avant-garde groundwork but with a discernible shift toward a more pragmatic approach that harmonized with the changing tides of Soviet urban policy. Unlike Leonidov's plan, May's project explicitly addressed the landscape line and envisioned how the city could be expanded and developed with the imminent future growth, driven by its industrial core.

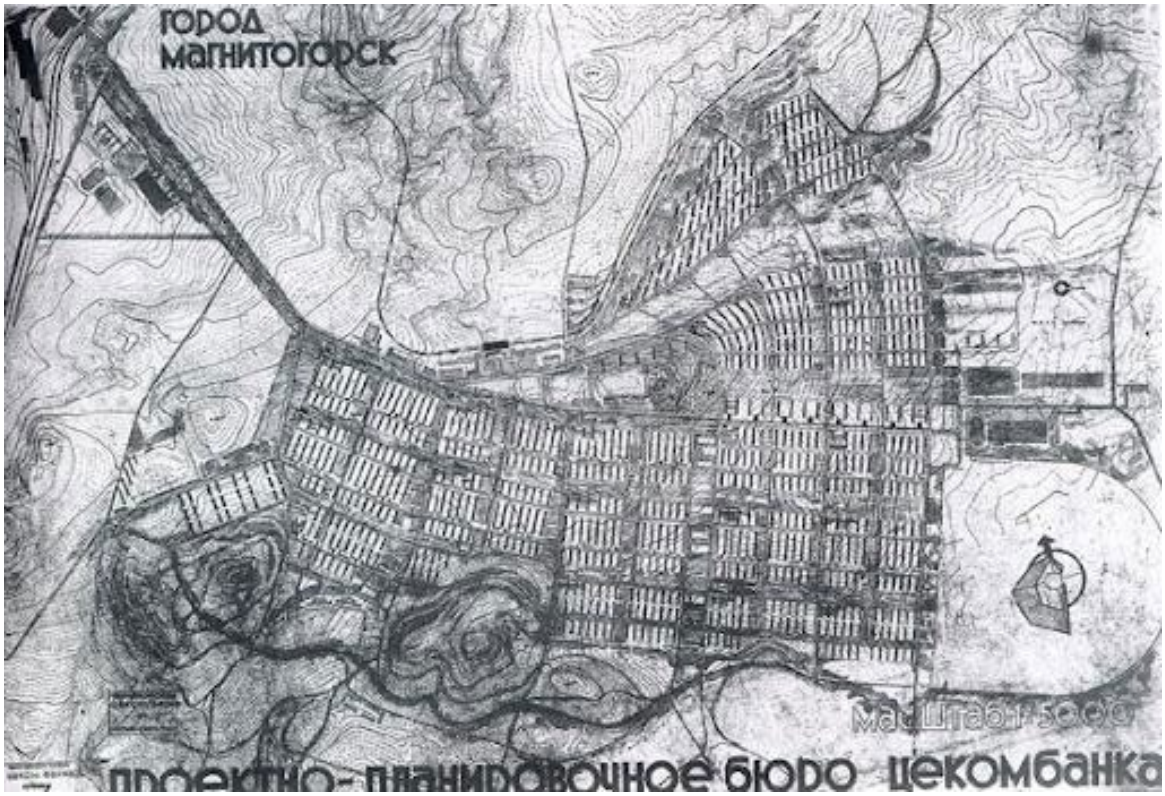


*Figure 8 Ernst May's plan 1930*

In November 1930, May introduced his rendition for Magnitogorsk, heavily influenced by his earlier project for the Garden City of Goldstein. The design was predicated on the principles of modern urban development, showcasing a master plan that combined the organization of public open spaces with detailed housing arrangements.

One of the notable features of his plan was the inclusion of three-story linear buildings, designed to optimize space and provide adequate sunlight and ventilation for each apartment.

These linear buildings were strategically oriented and spaced to ensure that each unit had maximum exposure to natural light, reducing the reliance on artificial lighting and promoting healthier living environments. This height was practical, allowing for ease of access without the need for elevators, which were a luxury at the time and difficult to maintain.

The layout of these buildings was designed to foster a sense of community among the residents. The ground floors often featured communal spaces, such as laundries and storage areas, and were linked by landscaped communal gardens. These gardens were intended not only as recreational spaces but also as areas where residents could meet and socialize.

Moreover, the positioning of the buildings along green belts helped to integrate nature into everyday urban life, providing residents with accessible and pleasant outdoor spaces right outside their homes. This arrangement was part of a broader strategy to create a harmonious balance between urban and rural elements within the city, promoting an environment where industrial efficiency coexisted with agricultural productivity and ecological sustainability.

May's vision for Magnitogorsk was anchored in the linear city concept, aiming to bridge the divide between city and countryside, as depicted in the still-existing plans from 1932 which exhibit this rational organization (Flierl, 11).

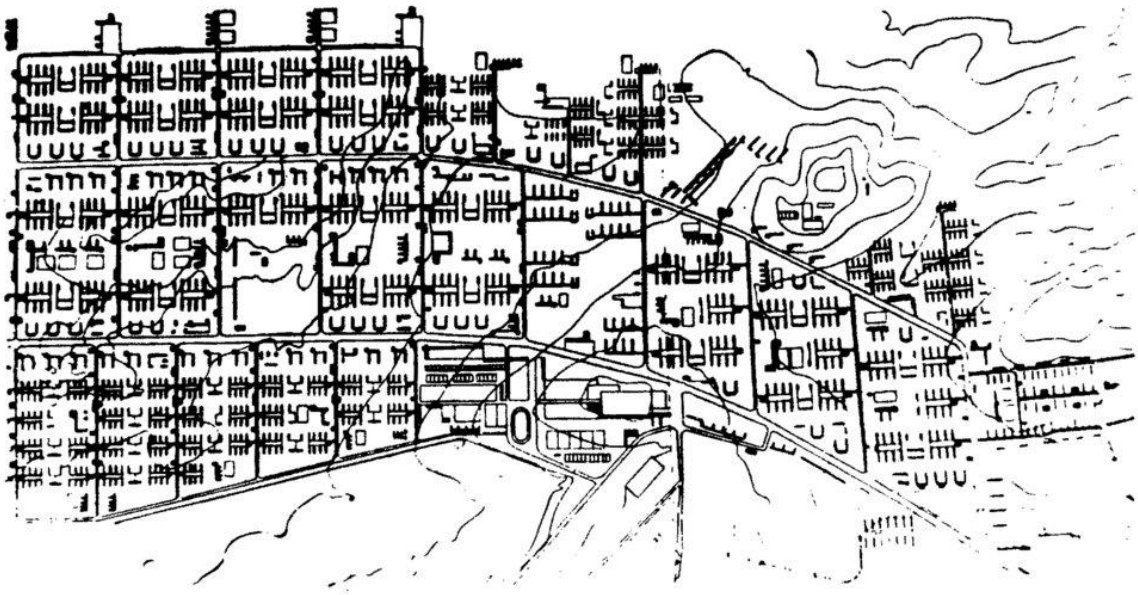

*Figure 8 Ernst May's masterplan linear city*

**Examination by Soviet Urban Planning Criteria**

- Classlessness and Urban Form:

  May's layout for Magnitogorsk seemingly adopted the linear city framework to promote an egalitarian urban fabric. However, it was subject to criticism for potentially sacrificing the city's dynamism and diversity in its pursuit of an overly regimented form - much similar to Leonidov's plan.

- Collectivism in Living Spaces:

  May's plans incorporated communal facilities and open public spaces, reflecting a dedication to communal life. State Planning and Urban Development: While the foreign expertise of May's brigade was instrumental during the initial phase of Magnitogorsk's development, the eventual pivot to a Soviet-driven, more pragmatic urban planning ethos signalled a departure from the international modernism that May represented.

- Integrating Industry and Agriculture:

  May's master planning mirrored Leonidov's aspiration for an integrated urban-industrial-agricultural continuum. Compared to Leonidov's proposal, the plans arguably placed industrial facilities adjacent to agricultural zones, aiming to create a cohesive urban environment that supported both sectors.. However, despite its theoretical merits, the actual implementation of such integrated planning in Magnitogorsk faced substantial challenges, largely due to the intense focus on rapid industrialization under the Soviet Union's First Five-Year Plan.

- Prioritizing Social Welfare:

  The concept of detailed planning of public rooms on the ground floors of three-storey linear buildings and public open spaces and the comprehensive approach to urban development suggested an emphasis on social welfare.

Ernst May's plan for Magnitogorsk stands as a monument to the marriage between avant-garde ambition and the necessity for practical urban development within the Soviet Union's first Five-Year Plan. The strongest points of his design lay in its structured open spaces and the attempt to infuse modernist urban principles with the ideals of socialism. Despite this, the project was not immune to critique, primarily for its potential idealistic overreach and the challenges inherent in applying a Western planning model to a Soviet industrial city. (Flierl, T. 11)

## 3.2 Radiant and Garden City

### 1947 General Plan for Magnitogorsk

Post-war Magnitogorsk was poised for a new phase of urban development. One of the pivotal aspects of Magnitogorsk's post-war urban planning was dictated by its role in the previous years. While unaffected directly by battles and bombardments (unlike many other Soviet cities) due to its location, the city played a crucial role in supplying the Soviet military-industrial complex with various resources and military products - from tank parts to bombshells. Therefore, the city required an influx in labour force and allowed for persistent growth, playing an important role in the overall USSR economy. Thus, expansion plans are required to be drafted.

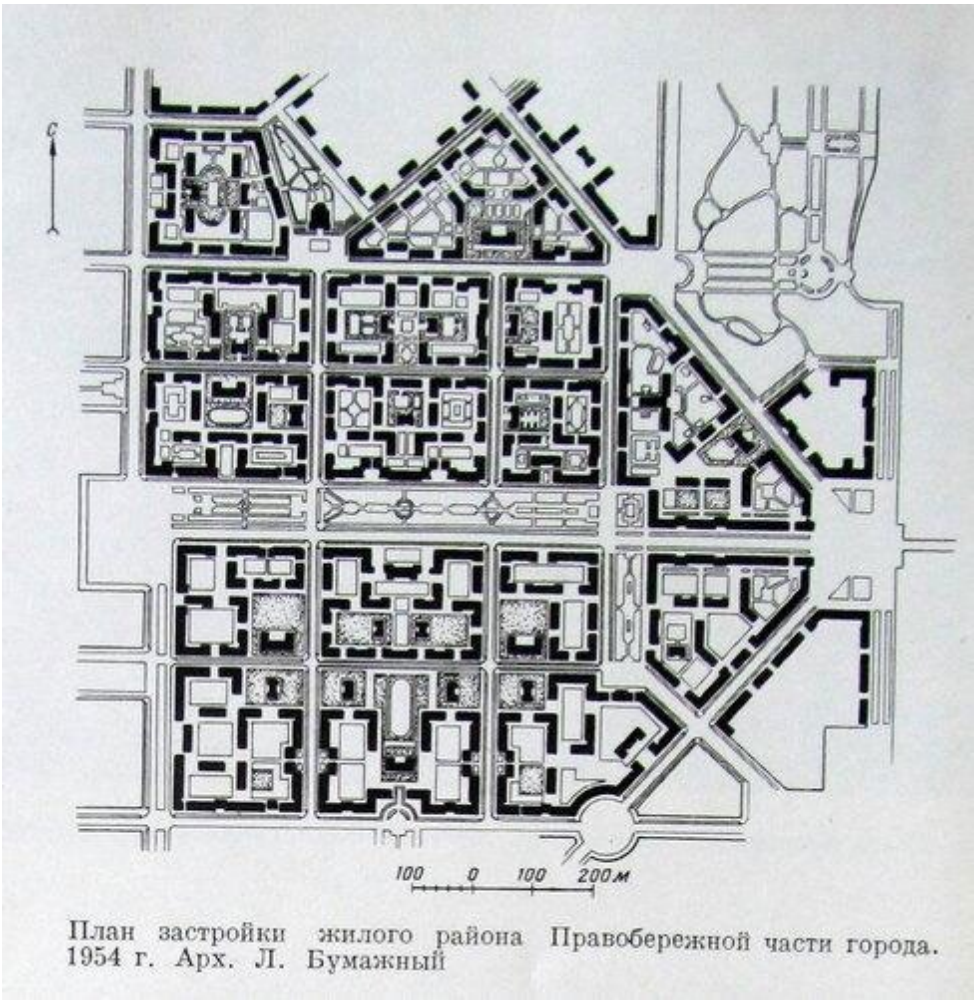


*Figure 9 Living District plan. Right bank city part. 1954. L. Bumazhniy*

The 1947 general plan reflects an approach integrating radiant elements—characterized by spokes or arteries emanating from a central core, typically the city center or a major landmark. This radiant structure was a shift from the strict linearity of earlier plans, intending to facilitate movement and connectivity within the city. In the case of Magnitogorsk, the radiant layout appears to pivot around

the industrial complex, perhaps symbolizing the city's industrial identity while radiating into residential and civic sectors.

**Examination by Soviet Urban Planning Criteria**

- Classlessness and Urban Form:

  The radiant model proposes a center that unifies the city, which could support the Soviet ideal of classlessness by providing equal access to the city's resources from various residential sectors. However, the concentric zones might inadvertently create hierarchical spaces, contrary to the egalitarian ethos. The pivot from linear to radiant structure was dictated by pragmatic reasons, bound to the foundation of the city - its factories and plants. Dominance of the proletarian class (a heavily professed backbone of socialist and communist regimes) in such city structure would still presumably maintain the homogeneous nature of the city population with respect to wealth distribution.

- Collectivism in Living Spaces:

  The general plan of Magnitogorsk may have sought to enhance community living with radiant roads linking various districts to communal centers. This could bolster collectivism by connecting different communities through shared spaces and facilities. Thus, Magnitigorsk sets an example of how expedited growth may require to re-evaluate societal links in terms of a more general picture, addressing the level of city communities, rather than individuals living together.

- State Planning and Urban Development:

  The Soviet state's influence is evident in the radiant model's centralized planning structure. It exemplifies the state's role in orchestrating urban development to serve collective goals and industrial efficiency. Such development would hardly be carried out spontaneously and allowed for controlled expansion.

- Integrating Industry and Agriculture:

  The radiant plan likely allocated distinct zones for industrial and agricultural development. This separation is key to maintaining a functional balance between the city's industrial core and the surrounding

agricultural areas, although the true integration of these sectors may be less fluid in a radiant design. This plan largely lacks the compatibility between agriculture and industry, especially for an expanding city. Therefore, one may call this aspect to be a weak point of this plan. At the same time, such consideration may be justified by the necessity to prioritize iron ore extraction and processing over any other form of economic activity - aligning rather clearly with the top-down approach of Soviet economy.

- Prioritizing Social Welfare:

  A radiant city's design inherently promotes accessibility to parks, cultural sites, and recreational areas, potentially enhancing the welfare of citizens. The plan would likely have dedicated spaces for public amenities, ensuring they were a focal point in the city's landscape. Radiant layout potentially would allow to link different parts of the city together, including linking more of the living parts to leisure areas of the city.


*Figure 10 General plan of Magnitogorsk 1947*

The 1947 plan for Magnitogorsk, when viewed as an adaptation of the Radiant City model, aligns with several key principles of Soviet urban planning. Its

strongest attribute lies in its potential to centralize social amenities, theoretically allowing for equitable distribution and access. However, the plan's success would ultimately depend on its execution and the city's ability to maintain the balance between serving its industrial roots and fostering a thriving, inclusive urban community. This radiant approach represents a departure from rigid linearity, offering a more dynamic and interconnected urban fabric that seeks to reflect and serve the socialist ideals of the time - more pragmatically and efficiently.

## Discussion and Conclusion

Magnitogorsk is a prominent example of the Soviet's approach towards societal development projects and build-up. It was an ambitious project, targeted at creating a unique space for people to live and work in - a proper socialist city of the future, where labouring masses could enjoy enhanced living conditions while staying highly efficient and high-achieving. At the same time, it always had a very clear practical set of goals and purposes within the planned economy of the USSR. Therefore, it could not remain just a postcard socialist utopia - it also needed to be effective and generate extensive production value, required by the rest of the country. Evidently, Soviet socialist doctrine was setting ambitious, but often conflicting goals, which required creative implementations, supported by truly impressive resource allocations and powerful political strides. More often than not, such an approach would yield interesting, albeit contradictory results.

On many occasions, the young socialist state was driving rushed and ubiquitous industrialization, giving many a chance for many to build experimental cities from scratch. And Magnitogorsk's urban planning of the era showcases ambitious plans, that fell short of some aspects of harsh reality due to the shortcomings of politically (and ideologically) guided decision-making or simple lack of knowledge and/or preparation.

There are a few key conclusions, briefly summarizing the history of urban planning of Magnitogorsk, that is to an extent symbolical of the general ethos of urban planning in the USSR:

1. Western urban planning models in the USSR were often used as an inspiration by soviet architects, however, they were also sometimes misinterpreted. Namely, the linear city model was originally meant to connect two urban centers and stretch along the agricultural fabric, which was intended for the de-urbanization of heavily populated regions. As such, the problem did not exist for the region of the soon-to-become city Magnitogorsk, however, the model was still applied there - and in many other Soviet urban projects. The linearity of this model was associated with the linear organization of the society, driving the classlessness ideological pillar of socialism. Thus, it exemplifies a blind application of urban models without taking into account the relevant practical context.
2. Some of the core societal principles of the Soviet ideology proved to be far more challenging in implementation in practice for the urban planners at the time. At Magnitogorsk, the seamless integration between agriculture and heavy industry was virtually an almost impossible task from the very beginning due to the nature of the landscape and climate - but it was made even more complicated due to the prioritization of the political principles of soviet urbanism, such as collectivism, classlessness

and social welfare. Moreover, rigid model application in the case of Magnitogorks left no space for the adaptations to the local geographical context.

3. At the same time, the application of novel urban models in practice allowed Soviet urban planners to achieve a number of important goals and milestones:
    a. Quickly deploy template implementations and allow to build of inhabitable cities at record times.
    b. Allowed sufficient room for various experimentations, leading to innovative and non-obvious solutions, whereas in Europe such room was much smaller.
    c. Foregoing the contradictory nature of the ideological push in the Soviet Union, the actual success of creating a vast amount of politically charged individuals and groups of people cannot be denied. One may consider that part of the puzzle here was provided by the urban planning, which at least managed to provide a framework for fostering socialist values - by applying a select number of Western urban models and adopting them to the primary needs of the Soviet government.

Soviet urban planning consistently attempted to overachieve, while often proclaiming its desire to equally fulfill the core socialist principles in constructing the ultimate communistic utopia. Such an idealistic approach, however, proved to be unobtainable in practice, leading to prioritizing some of the key ideological points over others. This often led to city projects, where simple daily lifestyle details of their inhabitants were overlooked, intentionally or not.

Naturally, this research does not attempt to provide a full comprehensive overview of the heterogeneous urban projects, conceived and realized at the dawn of the USSR. First of all, it addresses the planning aspect of the projects, but not the actual implementation. Secondly, this research specifically extrapolates from the case of Magnitogorsk, since it allows us to make some general conclusions on a variety of projects of similar nature, driven by the strong industrialization period in the history of the country. At the same time, this extrapolation cannot be indiscriminately used in characterizing every single social project in the history of the Soviet Union. Thirdly, only a handful of Western urban models are considered in the practical case of Magnitogorsk, while many other less relevant ones are left out.

Further exploration could delve into comparing Magnitogorsk's urban development with other Soviet cities that followed different models or Western influences. Investigating how these approaches varied could provide deeper insights into the broader impacts of Soviet urban planning ideologies and their practical applications.

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