

The Constructivist Design of Ivan Leonidov in the Soviet Collective Consciousness

Qian Chen^{1*}

¹ School of Architecture, Art and Design, Guangzhou Academy of Fine Arts, Guangzhou, China

Email Address

1047699576@qq.com (Qian Chen)

*Correspondence: 1047699576@qq.com

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Abstract:

This article analyzes the social basis and formal sources of the formation of Soviet constructivism by summarizing the emergence and influence of the collective consciousness of the Soviet Union after the October Revolution. In the context of the micro-architecture movement before the Soviet Union, this paper expounds Ivan Ilyich Leonidov's constructivist design ideas and the design works formed under his influence, so as to further summarize Leonidov's design ideas. The world impact of design. Constructivist design is a revolutionary and institutional artistic manifestation in the collective consciousness, which makes Soviet design play an unshakable and important role in the process of promoting modernist design.

Keywords:

Soviet Union, Collectivism, Ivan Ilyich Leonidov, Constructivism, Design Impact

1. Introduction

The history of design development is inextricably linked to art, technology, and the current state of society. After the First World War, the modernist movement emerged and swept across Europe and the world, triggering a far-reaching change in the history of architecture. This movement shook the foundations of the traditional classical architectural system and shattered the domination of architectural activities by eclecticism and various kinds of retrogressivism [1].

In the early twentieth century, Russia experienced the October Revolution led by Lenin and the establishment of Soviet power. The change of power put Russia into a period of social turmoil. On the other hand, the victory of the October Revolution led to a high artistic atmosphere, the emergence of new creative trends, and a great change in the way of creation. With the need to build a socialist society, the construction of the socialist regime was faced with new social goals and visions of the people and the urgent need to resolve new social contradictions and conflicts. The centralized, top-down management of the state gave rise to a high degree of collective consciousness in society, which promoted the development of social production while contributing to a shift in social preference from ornamental art to practical design. Under the collective ideology of the Soviet state, the VKhUTEMAS Academy was established, proposing the combination of art and production, science and technology.

The academy became a meeting place for compositionists, inspiring the revolutionary and institutional manifestation of compositionist design in the collective consciousness. The development of Soviet Constructivist design could not have been achieved without the combined efforts of many great designers. The purpose of this paper is to examine the individual designers in order to present a more nuanced view of their design thinking. Ivan Ilyich Leonidov, a graduate of the Kutymas Academy, was a Soviet Constructivist architect, urban planner, painter, and teacher. Leonidov's design was active in the 1920s and 1930s, during a period of dramatic changes in the Soviet social environment, when the practice of architecture was undergoing severe tests and major adjustments. Leonidov's design practice as a compositionist was under the influence of the Soviet collective consciousness, and a more effective reading is to establish a link between design practice and social context.

2. Social Background: the Emergence and Influence of Collective Consciousness in the Soviet Union

With the success of the October Revolution, social construction entered a period of renewal in which a hundred things were left to chance. The establishment of the communist system and the rise of the proletariat led to an emphasis on populism in art, and artists and designers devoted themselves to serving the new socialist state in its cultural construction. Russian avant-garde artists combined art with the revolutionary consciousness of the proletariat, reflecting the collective consciousness of the socialist proletariat. On the other hand, as an emerging socialist state, the Soviet Union had a system of planned economic management with a highly centralized, top-down administrative means of issuing directive targets in the early stages of its development. All aspects of people's lives, and indeed the economy and production of society, were treated as subordinate parts of the overall plan for state development during this period.

Due to the autocratic rule of Tsarist Russia, the development of the Soviet Union's industrial revolution and new arts was relatively late. From 1901 to 1920, there was a period of rapid development of national enterprises in the Soviet Union. During this period, the development and application of new technologies, metal structures, glass materials, and cast-in-place reinforced concrete structural systems gave birth to constructivism, which is manifested in the freedom of composition and the modern treatment of "components" [2]. Founded in 1920, VKhUTEMAS College, as a Soviet-Russian state higher art and technology studio, was one of the most important sources of modern design thinking. The highly centralized social management of the Soviet Union and the social background of vigorously developing industrial technology also triggered the innovation and development of design. What Hujemas brought was a collective social art experiment.

3. The Formation of Soviet Compositionist Design and Its Characteristics

3.1. The social basis for the formation of Soviet compositionist design

After the October Revolution, the Soviet Union had to concentrate its social resources on the industrialization of society in order to build a new socialist state, which required a large degree of economic and practical considerations in production practices. Although Hüttemas was prevalent at almost the same time as the Bauhaus

and had many similarities, Hüttemas did not exist only as a school. In the 1920s, it provided a comprehensive free art education for more than 2,000 students and was more of a workers' education institution for the socialist cause of the state. As a result, the place of art education also took on the nature of a commune under the collective, a model of art education within the structure of the political model. Constructivist design in the Soviet Union was birthed within the educational mechanism of the Hutemas, which was designed to promote the development of industry and manufacturing by shifting from pure art to applied art and promoting factory production and manufacturing. Constructivist thinking was not only present in the field of art in the Soviet Union, but it also became a tool of the state socialist system.

3.2. Soviet compositionist ideas and formal sources

The emergence of the "Futurist" school in Europe at the beginning of the 20th century played a key role in the creation of Soviet Constructivist architecture. The term "futurism" first appeared in the "Manifesto for Futurist Architecture" by the Italian architect Santa Teresa, which advocated the replacement of traditional construction with mechanical structures and new materials. "Futurism is characterized by several features: movement and temporality, industrialization, and modernization". However, this characteristic did not make Futurism widespread in Europe but profoundly influenced the development of art and architecture in the Soviet Union and other regions. V. Tatlin, a representative architect of the Soviet Constructivist movement, designed the Third International Memorial Tower, which broke with the architectural patterns of the past and created an architectural form that represented the future with a great deal of passion and creativity [3].

The term "constructivism" first appeared in the "Manifesto of Realism" published by Garbo and Pevsner in 1920. Influenced by Cubism and Futurism, its artistic style is embodied in abstract geometric structures as the main feature, hoping to "cut off the connection between art and natural phenomena, thereby creating a "new reality" or "pure" formal art" [4]. After Lenin's death in 1924, the modernization of industry and agriculture, the struggle for housing and food, and the struggle between rural and urban areas became prominent. From an architectural point of view, the most long-standing problem is obviously housing. The urgency of ensuring the material life of workers has triggered the reflection of the younger generation of architects, realizing that they can no longer focus on formalism, and thus a new group has emerged. -OSA (Association of Contemporary Architects), led by Moise Ginzburg. Ginzburg emphasized that collective connotations cannot be imposed on residents simply through architectural forms. At the same time, Malevich, who taught in Khutemas, was the founder of Russian "Supremacy", and his "Supremacy" thought was influenced by everything from painting to architectural art. Architects began to explore a new architectural language, introducing Cubist structures associated with "motion and form." In the Soviet Union, constructivism was embodied in the combination of advanced technology and engineering with the accepted goals of communist society, thereby leaving a significant influence on the later development of architectural design.

4. Leonidov's Compositionist Design Works and Their Ideological Embodiment

4.1. Avant-garde artist: Ivan Ilyich Leonidov

The Russian avant-garde artists combined art with proletarian consciousness, showing an ideological edge that made early Soviet modernist design more of a contemporary mission than Western modern art of the same period [5]. Leonidov, as one of the distinguished students of the Hutemas Academy, showed a strong compositionist style in his design creations. At the same time, as a student of Ginzburg, his design philosophy was deeply influenced by OSA, with more emphasis on material features and geometric connotations under the socialist collectivity. Leonidov's designs present an unstable and dynamic structural character, with a desire to make recognizable artistry in the design elements, no matter how simple the form of the building itself. His artistic approach to geometry was innovative and contributed greatly to the search for a new architectural appearance. Leonidov relied on the latest achievements of modern technology when creating volumetric spatial compositions, seeking to maximize the qualitative capacity of structural and compositional elements. As a result, his design works often faced a conflict between ideals and practice, and for this reason, he also tried to imagine many possibilities that were not realized, but only one personal work was completed in his life.

4.2. The Lenin Institute

At the end of the 1920s, when the development of constructivism in Russia was facing consolidation and dogmatization, Leonidov graduated from Kutymas in 1927 with a design for the Lenin Library Institute on Lenin Hill in Moscow. Although the design was only at the conceptual stage as a student project, it was highly influential both at home and abroad, and thus gained a high reputation as one of the programmatic architectural works of the early twentieth century. More importantly, the proposal for the Lenin Institute inspired the creation of Constructivist architecture at that time, breaking the pattern of creation and pointing out the direction for solving many practical problems encountered in the development of Constructivist architecture.

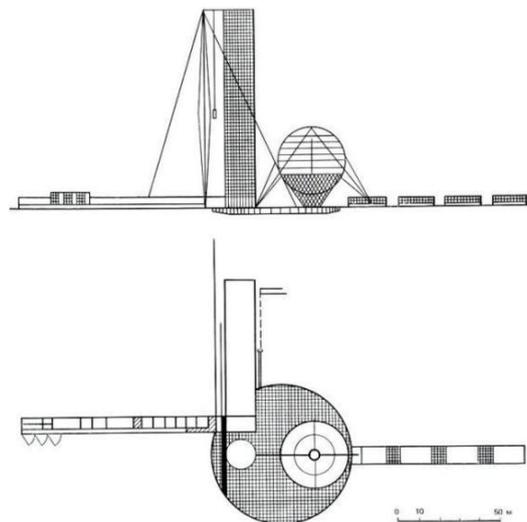


Figure 1. Drawing of the Lenin Library Institute programme.

Leonidov divided the building into different simple geometric forms, including a skyscraper-sized library, a planetarium, and a dome, all linked together by a monorail (Figure 1). While the volumes and forms themselves are geometrically simple, their complex interrelationship of contrasts and layers produces an exquisitely rare architectural composition. The building can even be seen simplistically as a spatially

right-angled coordinate system and a point in a coordinate system, and the resulting clever interplay of layouts brings about a strong artistic impact. Two glass-faced forms are used: a rectangular library tower and a spherical lecture hall, both standing on a pivot point that serves as the cornerstone of the entire structure. The entire suspended, floating assemblage is stabilized by cables, and it is connected to the city by an overhead monorail space transportation line (Figure 2). The Lenin Institute was the starting point of Leonidov's Constructivist architectural creation, and after A. Vesnin and Ginzburg, Leonidov quickly became the leader of the second generation of Constructivist architects.

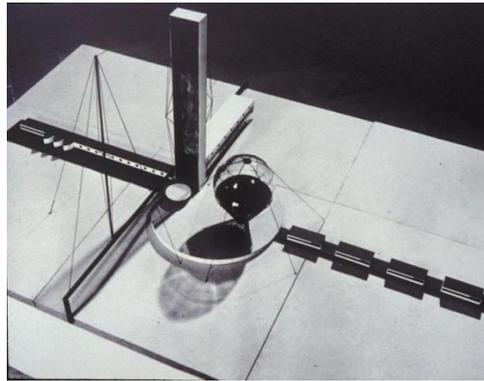


Figure 2. Model of the Lenin Library Institute programme.

The Lenin Institute is a classic example of suprematist composition, based on the architect's precise considerations and the relationship between the elements of "weight, speed, and direction of movement," as Malevich put it. The centrifugal kinetic element, which is reflected in the volumetric composition, is intensified by the sense of three-dimensional dynamics and centrifugal movement. Thus, Leonidov's model can be understood as a highly original description of Euclidean space. Three of the main axes and development lines are defined by the main architectural volumes, and the spherical auditorium structure creates a direct connection with the structural ropes, showing the conquest of gravity and architectural space. This struggle to point to space and symbolize eternity is at the root of the symbolism of the Lenin Institute project. Leonidov's work embodies the technical and technological emphasis of Constructivism, artistic composition, and geometric abstraction, and revolves around the systematic nature of "total design".

4.3. 1930 Palace of Culture Project

In the 1920s, the concept of the "workers' club" emerged in the Soviet Union under collectivism, providing a space for proletarian political activity as the core of communist life, with leisure and entertainment functions [6]. Leonidov was influenced by Malevich's work and designed the club as a science-fiction conception of a suprematist mega-structure, the culmination of which was the Palace of Culture in 1930 (Figure 3). The glass lecture hall, planetarium, laboratories, and winter garden are arranged on a rectangular grid with little regard to the traditional landscape. It shows that light structural techniques can be employed in buildings attached to the earth, and the flagpole with the blimp tied to it is enclosed in the entire composition. His designs represent a standardized design strategy in Constructivism—a high degree of standardization of basic units and the use of variable combinatorial logic to meet the requirements of diversity [7]. Leonidov's design of cultural facilities seems to float in space, eliminating the perception of distance, depth, direction, or ground. Thus,

the ground is no longer the basis for the stability of the building. The drawings are placed in an infinite, gravity-free space where images can be projected without regard to topography[8].

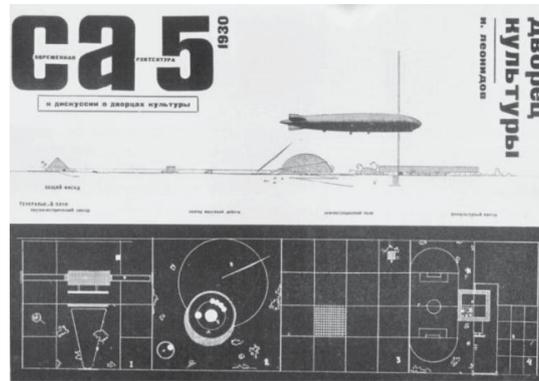


Figure 3. 1930 Drawings of the Palace of Culture project.

4.4. Linear urban planning and design

The Soviet Union faced a complex argument between “urbanism” and “non-urbanism” in the context of collectivism, the avant-garde debate over socialist urban planning. Leonidov led the Russian Organization of Architecture (OSA) in an urban competition for the new city of Magnitogoros, located at the southernmost tip of the Ural Mountains, with a proposal centered around a linear city (Figure 4). Leonidov believed that the ideal magnificent city should inspire strong creativity, be able to help overcome conflicts between people, and contribute to the creation of a harmonious and prosperous world. However, due to the needs and resource conditions of the socialist state at the time, large-scale construction planning and provision of residential building types, OSA could not come up with sufficiently concrete implementation plans [9] and lacked groundedness. Looking back at Leonidov’s urban planning, one can see the systematic failures caused by the limitations of the times; one can also find a great number of lessons for today in the past vision. Thereafter, this linear city concept was introduced to China in the early 1950s, along with an invited Soviet expert mission to Chinese urban planning. Today, a best-practice sample of the linear city theory is China’s Special Economic Zone, Shenzhen (Figure 5).

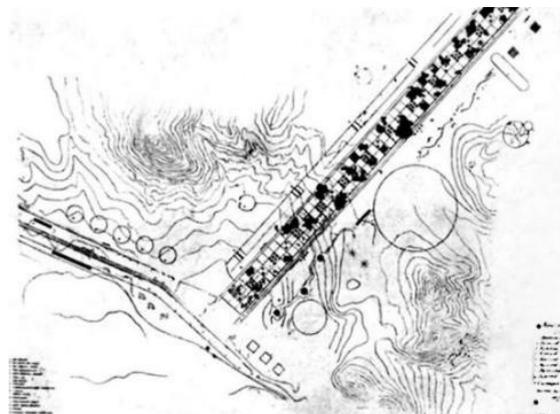


Figure 4. OSA, Planning scheme for socialist settlement in the city of Magnitogoros (entry), 1930.

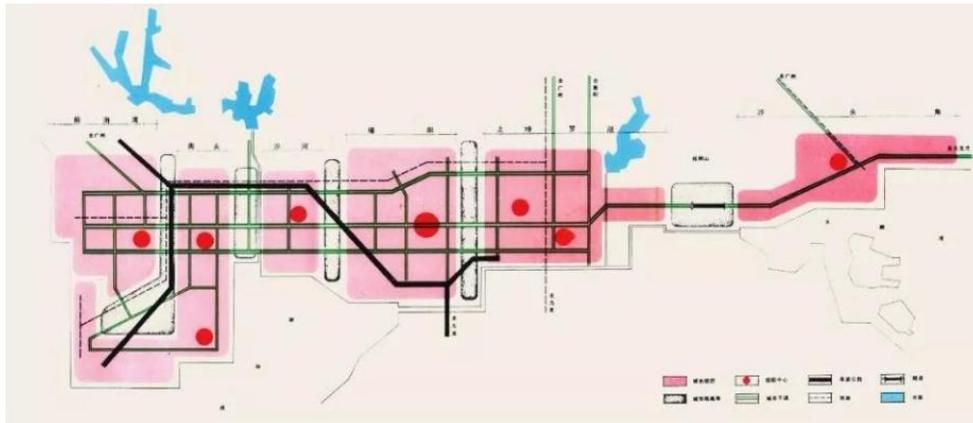


Figure 5. Shenzhen Urban Function Analysis Map, 1986 (Source: China Academy of Urban Planning and Design).

Contemporary Insights from Soviet Constructivism and Leonidov's Design

Ivan Leonidov's constructivist works are transcendent of reality, a transcendent creation of solidified Constructivism, and his works are far-reaching. Leonidov's works not only reflect the time in which he lived; they also show his own characteristics. Also in a social class environment, Leonidov's designs are a value-based conception of socialist society and the will of the people. The West Glass Pyramid of the Louvre, designed by I.M. Pei, has a compositionist meaning. Its visual presentation of spatial suspension and permeability is highly relevant to Leonidov's design of the Lenin Institute. The pyramid structure is composed of a steel frame with a strong technical and technological connotation [10]. In the compositionist conception of the city, the linear city, which embodies the intention of "collectivity" and de-classification, influenced Le Corbusier's linear city design, which was eventually put into practice in the urban planning of other countries. The compositional structure of the combined spaces of the Leonidov Palace of Culture proposal anticipates the work of designers such as Konrad Wachsmann and Buckminster Fuller. Leonidov's design work emphasizes the acceptance and innovative use of new technologies and materials. In other words, by inspiring a fundamental change in the concept of space and place as a result of media influence, his works allow people to see the world from a new perspective, allowing them to fully develop their imagination of a new socialism. Nowadays, the rise of future architecture and future science inevitably faces a reconciliation between architectural art and technological revolution. The social context and the situation of the times can create the vision of the future. The impact of technological development will give rise to people's imagination and design rhapsody of future life.

5. Conclusions

Architecture and politics are two complex and relatively independent fields. Constructivist design, formed under the international collective consciousness, was the artistic embodiment of a social system, a construction of life under the phase of a strong state consciousness. Soviet compositionism as a socialist state shaped proletarian consciousness in all of its overlapping artistic and design innovations. Leonidov's design thinking was de-classed and de-formalized, which was closely related to the background of the Soviet era. The application of the simplest geometric forms in the functionalist tradition led to a change in the perception of social issues, a

modification of aesthetic concepts, and the emergence of more curvilinear and complex forms in architectural form.

With the Soviet sense of collectivity, art and design were particularly focused on the practical or social aspect; that is, art should go to social life while needing to build bridges between art and production and to create new art forms based on production materials and mechanical technology. The development of the disciplinary theory of art and design is not simple, but the result is often produced in the context of multiple overlapping fields. Compositionism embodied the contradictory position that artistic experimentation required both highly individual, subjective creativity and an exploration of collective, objective common perception. The individuality and collectivity in Soviet society were the result of a differentiation between the environment of the times and the social environment, but not two parallel results, and the compositionists always debated and wandered between them, making them a colorful addition to the history of modernist design. Under the two contexts of being based on the times and being based on the region, the designer is able to stimulate the maximum potential of art and design creation.

Conflicts of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

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