THE SPACE OF THE AVANGARDE – A NEW GRAVITATION

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Introduction

When discussing the Russian avant-garde of the 1920s it needs to be noted that, though increasing well known in the West, the achievements of its artists still have little recognition. When it comes to awarness among the general populace, the picture is the same both in the East and the West, in Russian society and in the mass media. Though over twenty years have passed since the political transformations in Russia, the art of the avant-garde has not yet found its proper place. Many of its members have not as yet begun to function on the widely understood art circuit. They have no museum, no place of commemoration where meetings and artistic events devoted to their work could take place. A symbolic example of this state of affairs could be the unending discussions and stalemate concerning the possibility of commemorating Kazimir Malevich in Nemchinovka on the outskirts of Moscow where the artist most often and most readily stayed during his lifetime¹ (Fig. 1). At present (2014–2015), nearly all the planned housing estates are standing on the former meadows of Nemchinovka (Romashkovo estate), while the monument is still waiting to be built (Fig. 2, 3).

The unquestioned currency of the 1920s avantgarde today is apparently due to two reasons. The first is the intellectual vitality of the subject matter. Representatives of the avant-garde were among the first who tried to combine the intellectual rationalism of public demand for new art with its strictly artistic effects. The second is the appearance after the year 2000 of new publications concerning the phenomenon of the avant-garde itself, as well as individual artists. These works can be divided into two groups: substantive publications such as Khan-Magomedov's² "Avant-garde trilogy" or the multi-volume Encyclopedia of the Avant-garde, and a large group of memoirs published by the children and grandchildren of avant-garde artist popular at the time. Socialist propaganda depicted them unequivocally as 'pro-collectivists', when, from what we know today, they were de facto anthropocentric in the artistic sense. They enthusiastically combined attempts to create a new society with new possibilities and new laws (including new laws of space), often proclaimed by themselves. Representatives of the movement, such as G. Klutsis, G. Krutikov, El Lissitzky, N. Ladovsky, K. Malevich, T. Varentsov, created a number of new theories and spatial visions the intellectual potential of which has still not been fully utilized. Here we could mention Gustav Klutsis's Dynamic cities, Georgy Klutikov's Flying city, El Lazar Lissitzky's horizontal skyscrapers, Nikolai Ladovsky's Dynamic City, the Planit concept of K. Malevich or T. Varentsov's New city, of which more will be said later.

Ergonomy according to A. Krasovsky's theory of rationalism

When looking for the intellectual sources of the new ideas adopted by the 20th century avant-garde, we cannot omit the bases of the theory of rationalism proposed by Apolinary Krasovsky. Its main message, contained in the words *from inside to outside*, played a fundamental role in the birth of the

¹ "Amemorial commemorating Kasimir Malevich will stand in the settlement of Romashkovo (site of the village of Nemchinovka – author) says Minister of Culture for Moscow Agglomeration Oleg Rozhnov – The unveiling will be timed to coincide with the date of the artist's death – 15th May (1935). Moreover, next year will mark the centenary of the artist's most famous painting – Black Square – one of the most discussed and most well known paintings in Russian art" – June 2014. In fact, by the promised date no monument was built or unveiled (author's comment); http://i-podmoskovie.ru/php/gorizonty-kultury/news/1492-pamyatnik-kazimiru-malevichu.html.

² A three-volume study of this period, its masters and the age, which includes: С. О. Хан-Магомедов, Супрематизм и архитектура (проблемы формообразования), РААСН, «Архитектура-С», Москва 2007; С. О. Хан-Магомедов, Архитектура советского авангарда, РААСН, «Архитектура-С», Москва 2005; С. О. Хан-Магомедов, Конструктивизм, РААСН, «Архитектура-С», Москва 2003.

avant-garde of that time and contemporary architecture as a whole³ (Fig. 4).

Apolinary Krasovsky's theory of rational architecture in the first decade of the 20th century assumed that progress in architecture is possible only through a constant relationship and cooperation between construction and form. In order to attain this correlation, he thought it necessary to give up dogmatic continuity of form as historic heritage and to subordinate it to permanent change dictated by technical progress. Form understood in this way opened up a new aesthetic dominated by ergonomics, which took the place of the erstwhile functional hierarchy built over generations. Krasovsky felt that the needs of contemporary architecture demanded a decided change in the role of the architect, who ceased to be solely the depository of the ancient Vitruvian triad (solidity, usefulness and beauty), but had, at the same time, to open himself up to the new value which was the measure of man's modern capabilities constantly replenished by technical and technological progress in the area of materials and constructions. Krasovsky's rationalism went even further. The new architecture was now to be closely linked by the construction solutions of individual elements, deciding about a new harmony and aesthetics. The end had truly come for templates of architectural details and ornaments which had been passed on from generation to generation and whose layouts and proportions were anchored in the Renaissance

and Baroque. In order to take their place, Krasovsky proposed enlivening architecture by giving colour new meaning and by new rules of grouping building blocks. The new role of construction was to be followed new meaning as to people's needs.

Thus the role of ergonomics increased, creating together with the *truth of the material* (*culture of material* in western translations) the framework of a new aesthetic in architecture and urban planning. According to Apolinary Krasovsky, the needs of people, like new constructions, change constantly, so the need for comfort meant something else one hundred years ago then it does in modern times (time of travel, means of communication, the commonness and availability of some material goods, etc.).

Constructivism, evolving at the time, was founded on Krasovsky's rationalism, defining anew people's needs and, as it later turned out, though only in declarations, breaking with the continuity of the European art heritage. For the context remained, from which the Constructivists, in opposition to the Suprematists, never resigned. But it was the Constructivists who gave themselves the right to "liberate art" from the relations and forms established by the academicians. It is assented that the first formula of constructivist philosophy implemented in practice, even before the phenomenon itself was defined by Alexander Gan in 1921⁴, was a series of counter-reliefs by Vladimir Tatlin from 1914⁵.

^{3 &}quot;The general trend towards purposefulness and functionality, a conscious and considered approach to the structure of the plan and spatial development, organization of the living environment [of people]were those principles of rationalism that were accepted by early modernism. The properties of planning decisions were always revealed in the form of the building [by means of], a hall or vestibule at the front set apart using a great window, an entrance marked by an avant corps, a straircase lighted by vertical windows which varied depending on a buildings importance or purpose, rooms varying in size and space between windows. In the appearance of the building according to the principle [of rationalism] was reflected its function and importance. In this way was met one of the main postulates of later modernists: 'from inside to outside', which originated from the theory of rationalism. Thus, the planning decisions [in modernist architecture] were correlated with the concept of block, volume and space, and vice versa, these correlated [with planning decisions]"; http://sun.tsu.ru/mminfo/000063105/312/ image/312-074.pdf.

⁴ They were joined by some members of the OBMOKhU – Society of Young Artists – Ioganson, Medunetsky, the brothers Stenberg, as well as O. Brik, B. Arvatov and others. The centres where constructivist theories were formed and introduced were the Higher Art and Technical Studios (Vkhutemas), the Insti-

tute of Artistic Culture (INKhUK), the theatre and workshops of Vsevolod Emilevich Meyerhold, the journal LEF. Practically straight away, "at the Second Exhibition of OBMOKhU, works which were in the laboratory phase, but already independently constructivist, were presented. This brilliant exhibition, as well as the following two, presented in the years 1921–1922 as 5x5=25, showed the evolution of young talents, artists who passed from static (easel) painting towards constructing spatial [three-dimensional] art works and then on to design, interior design, book illustrations or poster art."

Койнова Н. Становление и развитие идей русского конструктивизма в нач. XX в., 2010, http://www.nlr.ru/exib/construct/text6.html.

⁵ "The beginnings of constructivism evolved from the theory and practice of the Russian pre-revolutionary avant-garde masters, from the works of the futurist poets, who rejected all the values of earlier ages, were intent on the future and on the activity of 'leftist' artists, being a kind of laboratory of 'pure' form, colour, structure.

¹⁹¹⁴ is accepted as the year marking the beginnings of constructivist activity, when the painter Vladimir Tatlin created his first counter-reliefs, on which he had been working since his return from Berlin.

From the early 1910s Vladimir Tatlin, as a beginning artist of the avant-garde, just before the outbreak of World War I, was going through an impetuous metamorphosis from primitivism to cubism. The transformation was taking place almost at the same time when Kazimir Malevich was going almost in the opposite direction: from cubism to suprematism.

The clash of these two artistic personalities, active in the same place and time, was inevitable. Vladimir Tatlin forges words into action, developing the triad characteristic of his work: (social) need - (artistic) proclamation – (civic) structure. In the same time Kazimir Malevich, starting with composition (not collective but individual), introduced his own triad deciding about the needs of man: art (feeling - beauty), **religion** (*seeing* – sacrum) and **technique** (action – pride), ending with the mysticism of sensations distant from the utilitarian sensations of the everyday stressed by Tatlin. According to Tatlin, art is a vessel in which individual talents are gathered for collective advantage. In this vessel they disintegrate and become anonymous, to next join up for the collective recipient in pure artistic utility.

This characteristic feature of artistic contestation shows the sharp differences in the attitudes of the key figures of the Russian avant-garde. For Tatlin space does not contain movement and must be set in motion or 'forced' into an imposed whirl as form is only born in space set in motion. Whereas, according to Kazimir Malevich space 'lives by movement', 'breathes by movement' and this is its inherent characteristic, which creates form of itself, needing no material for this creating – from this the concept of non-objectivity appears in avant-garde art of the period. The peculiar dialogue of constructivists and Suprematists in the artistic and schol-

arly discussions of the time expressed itself in the characteristic and deliberate use of synonyms for movement and its opposites. Malevich's famous *rest* (покой) is the opposite of *movement* (движения), which became one of the principles declared by the constructivists.

The essence of a counter-relief was its meaning as intellectual opposition to ornament as it was known since antiquity. By definition counter-reliefs lost contact and context with the object they served. There followed a change of material and form of the components which were to create an independent cubic group, usually composed of materials contrasting in texture and structure (such as steel – wood, cardboard – stone, glass – canvas, leather – hemp rope)⁶.

The first counter-reliefs appeared in May 1914 at an exhibition of Vladimir Tatlin's paintings. The three-dimensional compositions on show combined painting techniques and the real texture of materials fixed together in the surface of the picture. These were the artist's first "painterly reliefs" while his interests were increasingly directed towards construction, materials and texture (Fig. 5).

The classic relief lives by chiaroscuro, the counter-relief by the imprint of its construction in space – one could say by its intellectual chiaroscuro. The power of these compositions lies in the fact that for the first time an artist of the *New Art* separated painting into picture, texture, material and form⁷.

Meanwhile, the idea of constructivism took a different path, though it made use of Tatlin's art proclamation. It triggered an idealistic belief in a new spatial context built using the third dimension. There arose the belief in construction without construct-

The counter-reliefs were compositions made up of various materials – strips of sheet metal, wire, wood, wallpaper, plaster and glass. All these materials, minimally processed and made into a cubist composition (a sheet metal cylinder, cardboard display board, wooden piles, cuboid pieces of glass, metal sheets) were fixed on a wooden base. The result was a relief collage composition. Due to the scale of these compositions [by definition opposed to the traditional relief based on internal discipline] they were called counter-reliefs." А. Н. Лаврентьев, История дизайна: учеб. пособие, М.: Гардарики, 2006, 303 с.: ил., с. 125 конструктивизм родченко фотография дизайн. ⁶ А. Н. Лаврентьев, История дизайна: учеб. пособие, М.: Гардарики, 2006, ил., р. 4, in: Rodczenko a konstruktywizm.

^{7 &}quot;Constructivism turned out to be the last 'child' of the Russian avant-garde and the only one which was born during the period of Soviet Russia. The official date of its birth was March 1921." Издательство "Слово"; http://www.slovo-online.ru/ru/direction/test/.3397.html

[&]quot;It was then that A. Gan. A. Rodchenko and B. Stepanov initiated 'The Working Group of Constructivists' in the Moscow Institute of Artistic Culture (INKhUK)."

[&]quot;The poet himself noted in his sketch on French painting: «at the beginning it was not from France but from Russia that the new term in art that was constructivism came...and so artists – Frenchmen must study in our country. No intellectual artifice [created on the basis of the old] will help, here is necessary a new, previously undeveloped place...»" А. И. Боровков, Галерея "Русский авангаро 10-30 годов"; http://artinvestment.ru/invest/events/20110314 borovikov.html.

ing, purely abstract, depicting nothing apart from the action of constructing itself⁸. In effect, Tatlin's achievements were too hastily abandoned, dooming the whole formation to domination of utilitarianism and application of the term productivists⁹.

This way of constructing the philosophy of space offered new opportunities in architecture, in construction of complexes, buildings and other architectural features. New roads were also opening up in urban layouts, in particular concerning theories of future cities, where a person would regain subjectivity, be seen as an individual with individual needs.

The city of the future according to the Russian avant-garde of the 1920s

At the time when the avant-garde was extremely active, towards the end of the 1910s and beginning of the 1920s, the fierce discussions of futurists and traditionalists on the place of architecture in the undetermined future also flared up in literary circles. In an article by the poet and essayist Osip Mandelstam *Humanism and the Present* (1920) the futurists – visionaries were attacked with the following words: "Who dares to say that the human dwelling, the house for man, chosen freely and knowingly, ought not to stand on the ground...? Viktor Khlebnikov¹⁰ answered with a vision of flying serpent building¹¹: "As the sea serpent swimming in the sea with head raised high, buildings will fly in the air.

Their shape will also change, subject to the dynamics of the forces acting on them, and will bend like the letter Z" (Γ – orig.). Soon El Lissitzky's proposal for a horizontal skyscraper would appear, on which the artist was working in the years 1923-1925. For the early avant-garde artists faith in the new possibilities of man, fueled by new inventions (the plane, the automobile¹²) led to a conviction about the imminent break with the barrier of movement of bodies, and thus to fully open movable structures in space. Lissitzki believed that the static city that we knew from the past would turn into a dynamic city. Then already there were voices talking about maturing creativity complementing itself, to be soon developed into the idea of *self-creative* creativity, very close to the contemporary concept of liquid architecture. This endeavour to create a new aesthetic, which was to be brought about by the third dimension, was made not only by El Lissitzky but also by Antoni Rodchenko, who was followed by other artists of the Russian avant-garde.

El Lissitzky's horizontal skyscrapers

El Lissitzky was one of the key figures of the Russian avant-garde in the first decades of the 20th century. He was a painter, constructor, graphic artist and architect, and his work in these areas was greatly influenced by Kazimir Malevich, whom he met in school in Vitebsk (UNOWIS).

The new style was called constructivism from the Latin constructio – building, constructing and became one of the new trends in avant-garde contemporary art of the 20th century, placing in the centre of its aesthetic the category of constructing, construction. The premise of the new trend becomes putting to the forefront the laws of physics governing the construction of solids and placing them under the control of machine computing systems. The new style was completely devoid of any aura of romance and mystery of creation of the old masters, it was rational, subordinated to the logic coming from construction, functionality and purpose." E. B. Бархатова, *Русский конструктивизм* 1920-х – 1930-х годов; http://www.nlr.ru/exib/construct/text1.html.

⁸ "The painting and graphic artist created a composition from geometric shapes or lines in which the arbitrary aesthetic, composition order of each element was replaced by mathematical relationships [algebraic or trygonometric], with great attention to intersecting and permeating solids and planes. Avant-garde artists were faithfull to all mathematical rules of modeling [abandoning the old aesthetic]. First of all, the spatial structure must be abstract, nondepicting. It does not represent anything other than itself. It was no accident that A. Rodchenko, in the early 1920s, collected photographs of aircraft, magazine clippings with pictures of suspension bridges, skyscrapers, transatlantic liners. He took his students to the museum of technology to lectures on the theory of relativity, collected radios. His library had books on astronomy, biology, psychology and logic. He was interested in the latest ideas in science and technology. This was the new abstract and philosophical sense of the world and became the content of his work." А. Н. Лаврентьев, История дизайна: учеб. пособие, М.: Гардарики, 2006, 303 с.: ил., p. 127.

⁹ В. Степанова, *Человек не может жить без чуда*, Москва, Издательство "Свера", 1994, р. 178-179.

¹⁰ Языковое новаторство Хлебникова; В. Гофман, *Собрание произведений В. Хлебникова*, под ред. Ю. Тынянова и Н. Степанова; http://www.ka2.ru/nauka/gofman 1.html.

¹¹ Ibidem.

^{12 &}quot;Secession as a modern art style did not last long. Its decline had already begun in the first decade of the 20th century. The reasons were varied but the main one was that new times had come, needing new forms and matter [surrounding us]. Mass production inevitably led to standarization. The revival of crafts, the cult of the handmade propagated by art noveau artists could in no way cope with the new demands of the present day or point in new directions.(...)

His concept of horizontal skyscrapers for Moscow consisted in eight such structures marking the major intersections of the Boulevard Ring in the city. They were to take on the form of dynamic vertical towers serving only for communication (lifts, stairs and technical infrastructure). Living quarters and facilities were contained in horizontal cuboids resting on three pylons almost 60 m in height (Fig. 6). This way inhabitants were freed from the inconvenient contact with the street. This move upwards was only seemingly effective, as is the case today when record-breaking tall buildings are built, putting aside problems of infrastructure and logistics in the hope that they will be automatically reduced thanks to the constructional and functional perfection of the building itself. This concept refers to the city of the future which will be dominated by new materials and technology in line with the slogan: "Our life now rests on a new communist reinforced concrete foundation", on which "the communist city-monolith will be built" and it will be a city for the new proletariat - the new society, "in which the inhabitants of the world will live" It should be noted that the shape and form of these structures incorporated a cubo-futuristic style, so we should assume that apart from its architectural, spatial message it also contained a hidden symbolic verbal message derived from the heritage of Jewish liturgy and Hebrew language.

G. Krutikov's Flying city

Georgy Krutikov, one of the great avant-garde visionaries, started to be fascinated by the futuristic vision of a world without barriers when he was a student. In 1917 he graduated with honours (silver medal) from his high-school in Voronezh. As a student he published articles devoted to the architecture of the future in such periodicals as "World" and "In the Whole World". At this time he created his own credo, a real challenge for new architecture as transcending the skies.

The idea of "future city" appeared as the subject of his diploma at the Faculty of Architecture (VkHUTEMAS then VkHUTEIN)¹³ and became the artistic and intellectual event of Moscow in 1928. It divided the scientific world into supporters and opponents of discoursing about the city of the future, for some shifting too far into the world of fantasy. The popular periodical *Building* in one of its articles tempered the general enthusiasm for Krutikov's innovative work *Flying city* (as it began to be called), considering it as lacking real instruments and possibilities of being implemented (Fig. 7).

In fact, the essence of the concept was not, as it would seem, pure fantasy but a search for alternatives to the problems of the contemporary city, for which the examination board gave highest marks. The scientific world's appreciation was evidenced by the fact that the work was included in the exhibition "Moscow-Paris. Review of architectural projects 1900-1930". It is worth remembering that in the 1990s Georgy Krutikov's project was exhibited at the Venice Biennale of Architecture in the pavilion Russian Utopia. In his concept he assumed realistically that future cities would suffer a deficit of space for building. He predicted that future metropolises would grow unrestrainedly and in future people would have to overcome the barriers of building on the ground. This was not naive thinking but resulted from an awareness that urban infrastructure would have to be freed of successive charges placed upon it that it would not be able to bear. Krutikov and the scientific community were encouraged in their thinking by the success of the first airplanes. it became clear to everyone that overcoming the barrier of gravitation was only a matter of time, of finding the key, balancing the forces acting on an object placed in the atmosphere, a matter to be solved in the near future. It also meant looking for new lighter materials¹⁴. According to Krutikov, only dwellings would find a place in the distant space while other urban functions would remain on the ground. In this he saw a chance for new solutions, functional

¹³ VkHUTEMAS Higher State Art and Technical Studios, which later became VkHUTEIN Higher State Art and Technical Institute.

¹⁴ "In 1916 I took part in the exhibition futuristic art called «Shop». At that time I went in winter and summer in detached autumn coat. I have lived in the room behind the stove in the kitchen, behind a partition made of plywood. I starve... and (simultaneously) despised bourgeoisie. Also I despised her beloved art from: Union of Russian Artists – aesthetes «World

of Art». I was close to those just financially set an artists such as Malevich, Tatlin and others. We all were then rebels against the accepted canon, tastes and values... We were inventors and batching world in their own way... We have created new concepts. We – now is not the inventor only, but innovators (creators of the new). So we saw the one another." [From the memoirs of A. Rodchenko]. A. Родченко, *Вариант творческой автобиографии*, Архив А. Родченко и В. Степановой (А. Н. Лаврентьев, *Ракурсы Родченко*, М., 1992), р. 18.

- spatial housing. The houses-communes being created at the time and the whole rhetoric of residential building as the 'technology' of the great city could develop in another direction. These would be cities - communities but different, with no need to crowd more buildings into already congested areas and with the organization of the new society freed of many inconveniences and restrictions. So the post-revolutionary equality of citizens could attain a real dimension. Freeing the infrastructure of city centres and industrial areas from constant movement between home-work-services, would greatly increase the potential of the metropolis. Transport between the residential districts in the air and the city on the ground would take place by means of individual transport capsules, which would land directly under the housing complex of its owners, reducing to a minimum communication between the different housing complexes. The structure of these complexes would resemble a multi-ring arrangement. The residential rings would form vertical structures, with one ring above the next and each ring containing basic services and sport and recreational facilities. This way the principle of balancing forces would pertain to the whole multi-ring complex and not single housing units. From the point of view of building a new society it would indeed be a new quality of the future city. The passive atmosphere above the metropolis would now be set in motion for the purpose of private transport as a network of lanes - transport air tunnels. From the perspective of a century we see that we have not been able to implement Krutikov's futuristic concept, but we have also not been able to solve the problem of congested cities. In the last hundred years the capability of infrastructure, and especially of mass transport, have changed only slightly.

The Planit concept of Kazimir Malevich

Kazimir Malevich also saw the future of the city as a vertical structure freed from the regimen of contemporary infrastructure. His two best known spatial structures *Planit* and *Architekton* break with the historic tradition of city layout or with the idea of a solid structure in space as a certain historical heritage. They should be understood as universal ideas,

more intellectual constructs than realistic projects. The starting point of his inquiries the defining of the new architecture as *architectonics* – a new field of knowledge combining elements of religion, art and technology unified with the new face of humanism – the art of overcoming oneself. Like G. Krutikov, K. Malevich separates future architecture into two trends: the individual and the collective. Both trends are to meet in a middle between the needs of the user of the city, seen on the one hand as a resident and on the other as its co creator – worker, machine operator, engineer, teacher, artist, etc. The difference, at the intellectual level, not spatial is visible in the concept of vertical and horizontal *Architektons* (Fig. 8).

The Planit idea is related to the search for an added element in suprematism and came early in Malevich's creative work. Some scholars, for instance S. O. Khan-Magomedov, consider them to be a draft phase on the way to the form of Architektons. Planits are described by Malevich as spatial objects, as opposed to Architektons viewed as purely intellectual entities. The concept of the *Planit* as a self-supporting dynamic structure placed in space above great cities, suggests it being intended as houses for the inhabitants of these metropolises (Houses for Earthlings), and is not lacking in futuristic rhetoric. As understood by Malevich, Planit is not just simply a shell hanging in the air but a modern tool of future man, in this case also a tool for living in. Its meaning is similar to today's smartphone – a tool for voice communication, though it can also perform many other tasks. Just like a mobile phone, Planit was to be a very individualized tool subordinated to the will of its owner. It is therefore a new tool, very distant from Corbusier's 'machine for living in'. It is more of a 'machine for man'. The essence of the *Planit*, or *intelligent house* was its multi-facade, mobile, changeable, dynamic and ergonomic character. The Planit was to fulfill man's basic needs without defining the context of place, just as the Smartphone already fulfills some of these needs today. The architecture of the Planit was to be the victory of architecture changing in time, architecture of the fourth dimension, such as the American "crippled architecture of skyscrapers". 15 According to Malevich, with the appearance

1920-х годов: С прил. писем К. С. Малевича и Эль Лисицкого (1922–1925), сост., прибл., ред. пер., подготовление текста, коммент. и примеч, А. С. Шатский, 2005, р. 146.

¹⁵ К. Malewicz (К. С. Малевич), *Собрание сочетаний в:* 5 томах, редкол.: Д. В. Сарабьянов и др., М. Гилея, 1995–2000, Vol. 4: Трактаты и лекции первой половины

of *Planits* the system of city planning and forms of living in them would change.

Gustav Klutsis' Dynamic City

Gustav Klutsis's vision of space for people, the new dynamic city derives not from workshop activities of the urbanist-architect but purely intellectual narrative. He was aided in this by the formula and kind of art he practiced – photomontage. Thus, it was more a formula of controversy and political declaration on the subject of cities of the future than practical action functional – spatial terms. Hence the attempt to understand this vision must include elements of his printmaking based on the symbolism of forms and signs (Fig. 9).

The characteristic features of Klutsis' work are made clearer in his famous artistic motto: "Look from all sides" and in this sense we can understand the directions of his artistic activities such as axonometric painting or axonometric composition, paving the way for the notion of functional realism.

It was the idea of a city in which man dominated over form and function, a city freed from the labyrinth of streets and limitations of the past, where there were no class or economic divisions, the idea of a city immersed in permanent auto creation, dynamic through the force of new technologies and materials and through the enthusiasm of revolutionary change. Embedded in an axonometric concept of structures and forms did not mean real parts of the city, but universal values drawn from Suprematism such as city planning as nature in the city, circulation, polymorphism, simultaneity, community. The dynamic city of the future the artist presents as a city - planet that escapes the laws of gravity and becomes immersed in the space of the universe, being the realization of the dreams of the new revolutionary society, a city without limits.

According to Khan-Magomedov, the central place in the concept of Gustav Kutsis' dynamic city is taken by the image of spherical space as a synonym for the dynamics of constant change. This is

an image of the city close to Suprematism, one of the first nonrepresentational messages, an attempt to describe the four-dimensional reality (length, width, depth, time) in the language of two-dimensional media. The result of this approach is to suspend the entire composition outside the gravity of any plane, point, line, form and body¹⁶.

Dynamic City according to N. Ladovsky

The academician and outstanding teacher Professor Nikolai Ladovsky saw the dynamic city of the future differently¹⁷. In 1931 he created the Great Moscow Project¹⁸. It assumed 'freeing' the concentric ring structure of the historic city by opening it up in the form of a parabola along the axis of Tverskaya and Leningradsky streets, which would make it possible to create a mobile centre. In this Ladovsky saw the chance of developing the centre of Moscow basing on the closed historic structure of the Kremlin (Fig. 10). In his opinion, together with the industrial revolution the concentric plan of old cities had become completely ineffective. In accordance with the demographic prognosis for all large cities, including Moscow, we could expect to see reconstruction of cities in order to shorten time needed to come into the centre and to make it available to all inhabitants of the metropolis. Meanwhile Moscow's problem was the result of its inharmonious development. It is worth remembering that for over two hundred years Moscow was not the capital of Russia and this reflected negatively on its spatial development. Ladovsky also took into account the Kremlin complex, though the historic centre of the city, would never serve the function of a creative force but only as an administrative centre and symbolic space¹⁹. The parabolic arrangement also had the advantage over the ring-concentric that development of further rings must occur at the expense of the former as linear-concentric.

Ladovsky believed that the concept of city development includes a much broader conceptual horizon than purely pragmatic, that is the quantity and size

¹⁶ С. О. Хан-Магомедов, *Супрематизм и архитектура* (проблемы формообразования), РААСН, "Архитектура-С", Москва 2007, р. 312; idem, *Архитектура советского авангарда*, РААСН, "Архитектура-С", Москва 2005, р. 77.

¹⁷ N. Ladovsky's idea, with small changes, known as the General Plan of Reconstruction for Moscow, was applied 30 years later by the Greek planner K. Doksialis, who called his plan *Dynamopolis*.

¹⁸ The project, generally known as Ladovsky's Parabola, was presented for the first time in 1932 at an city-planning competition devoted to ideas for reconstructing Moscow, and immediately aroused great interest both in the city-planner community and among Moscow's inhabitants.

¹⁹ С. О. Хан-Магомедов, *Сто шедевров советского архи- тектурного авангарда*, Издательство Билингва Москва 2004, р. 350-351.

in each category, but also as a strengthening of its position in competition with other cities-capitals, which was to translate into protection of the historical heritage of old Moscow while including into its organism features of the contemporary metropolis. In this way he gave rise to an intellectual discussion on the possibility of creating a so-called *flowing* centre and, what follows, entirely new expectations of infrastructures for the future. Ladovsky was also one of the main proponents for the introduction of high-altitude building to the centre of Moscow, an idea already expressed in the years 1922–1925 in student semester projects prepared at VKhUTEMAS²⁰. He initiated and inspired the works of V. Krinsky - the design for a skyscraper in 1922 or diploma projects of the younger generation (I. Leonidov or G. Kochar 1927–1929) ²¹.

The New City according to T. Varentsov

In 1928 T. Varentsov proposed another concept of urban space entitled New city. His idea was to divide the area into four units: a central unit and three auxiliary units.²² The main unit was allocated to central government and housing was made up of regular urban districts radial - concentric, marked by streets grids, while the backbone of the whole system, were three main thoroughfares coming from the middle of the structure every 120°. Inside the quarters of the central unit there were to be two types of residential buildings. One was a house-commune branching out in three directions, with a central tower with interior vertical communication. The second was a point building with a pillar structure. It is hard not to notice the many convergences and analogies to Corbusier's earlier theory of the contemporary and radial city.

Conclusion

Despite the passage of nearly a hundred years since the concepts of futurists, constructivists and

Suprematists, people are still almost at the same point when it comes to issues of space - infrastructure in modern cities. Large metropolitan areas develop faster carrying the risk of cultural overload with such features as anonymity, disappearance of neighbourly ties, social pathologies. A panacea for contemporary communication problems or the phenomenon of urban sprawl has not yet been found. Modern theorists, envisioning the city of the future have found themselves at a standstill, faced with impenetrable barriers, and like former representatives of the avant-garde, today's theorists tend to intellectually escape from the problems of the city and urbanism. They are deprived, however, of the freshness, enthusiasm and anthropocentrism of their predecessors. Today we do not build an ideological community for "equality, liberty, fraternity", as it was then perceived. Contemporary urban space is primarily an area of commercial competition.

Escape into a "city of the future" free from anthropocentrism is associated with the hope of building an urban entity not as great ideas and common values, but an ecological organism with energy self-sufficiency and technological sterility.

Tokyo Sky City or Vincent Callebaut's Lilypad City for climate change refugees aim to build a new vision of the city from basics, rejecting past achievements. Horizontal skyscrapers emerge from Shanghai and Tokyo to Rotterdam and Cologne (Fig. 11). A reminder of the avant-garde from over a hundred years back. However, the man and the street and their problems in the city are still the same. The possibilities of the twenty-first century were most clearly defined by Rem Koolhaas: "Currently we've stopped building cities, and rather build luxury districts and that is a fundamental change in the twenty-first century. Today, luxury has dominated our creative DNA in some way. Today antycity has become more important than the city, and the city has lost its natural linear development." ²³

What will the twenty-first century cities be like? Will we be ever liberated from the regime of infra-

²⁰ He came nearer to his objectives when his book *Skyscrapers in the USSR and the* USA appeared. Moskwa 1922; С. О. Хан-Магомедов, *Сто шедевров советского архитектурного авангарда*, Издательство Билингва, Москва 2004, р. 218.

²¹ Though the latter were not officialy under his direction; the promoters were A. Vesnin and D. Fridman.

²² T. Varentsov prepared a developed planning structure for the *New City*, combining the radial concentric structure in a complex relative to each other relationship (it was an attempt to

transform the radial-concentric structure in planning cities). A lot of attention in the project was devoted to zoning functions, isolating an especially wide area for residential buildings in the city centre. Глава 2. Социалистическое расселение. Градостроительные концепции. Строительство новых городов. С. О. Хан-Магомедов, Архитектура советского авангарда, РААСН, "Архитектура-С", Москва 2005, р. 217.

²³ Kelsey Campbell-Dollaghan; http://www.citylab.com/design/ 2011/12/case-generic-architecture/771/.

structure? Will pragmatism prevail or the nostalgic dreams of antigravity of the first Constructivists and Suprematists?

Translated by A. Petrus-Zagroba

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