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## MODULATION OF SPACE IN THE COMPOSITIONAL CONCEPTION OF STRYISKYI PARK IN LVIV BY ARNOLD RÖHRING

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**Abstract.** The given article treats the problem of space modulation as used by Arnold Röhring in laying the Stryiskyi Park. The concept was based on the natural rhythm of the Stryiskyi spring valley area. The proportions of the latter were preserved by Arnold Röhring and used in the compositional structure of the park landscape, in formation of green room parterres, enfilades and green valleys.

**Key words:** space modulation, Stryiskyi park, park composition, Arnold Röhring

### 1. Introduction

The creative activity of Arnold Röhring (1840–1913), as the Head Gardener and a landscape architect of city gardens and parks in Lviv at the end of the 19<sup>th</sup> and the beginning of the 20<sup>th</sup> century, is closely related in terms of compositional concepts and their implementation to the activity and theoretical views of urban studies of Julian Zachariewicz (1837–1898) and his son Alfred Zachariewicz (1871–1937). All of them were the creators of the historical Lviv of that time [1].

In J. Zachariewicz's view, architecture is the art of space formation according to the laws of mathematics. "The main task of an architect is to determine the proportions of a construction. These proportions will be pleasant to the eye, when dimensions of the plans of a building and its details will be made using one and the same geometric system [1, p. 156].

An amazing combination of mathematical logics with fantasy, intellect with imagination is typical for romantic and science fiction writers of the 19<sup>th</sup> century and it is one of the main features in the works of J. Zachariewicz. This idea is emphasized in his quotation made in December 1889 during a discussion at the Polytechnic Society in Lviv – "... the world has a mathematical structure, and we all subconsciously want to get closer to this mathematical ideal in our work ..., we see geometric forms in all the creation" [1, p. 157]. This view is not accidental. It is important to contrast theoretical and aesthetic principles of spatial and temporal trends in architecture of urban planning in Western Europe in the 17<sup>th</sup>–19<sup>th</sup> centuries [2].

In England, the famous theoretician who laid the foundations of aesthetics of the new time, was Francis Bacon (1561–1626), a humanist and a philosopher. The starting point of F. Bacon's aesthetics was his attitude to Nature: "The human being is a servant and an interpreter of Nature...", "Refinement of Nature is much higher than that of senses and mind...", – he wrote in his "The New Organon". Revealing the primary cause of Nature he underlined: "It alone should be honored as the Mother of all Sciences; because if Art or Science are separated from Nature, from their roots, they cannot grow any longer..., and all because of that they do not get their nourishment from the philosophy of Nature, which could give them new strengths and a new development" [2, p. 9]. This quotation illustrates that a constant collation of human activity with the existing natural processes was the main methodologic principle in F. Bacon's philosophy. In his program "A Great Renovation of Sciences" the essence of his conception of architecture of environment is laid out. According to F. Bacon's classification human knowledge is divided into three categories: Memory, Cognition (judgement) and Creativity (fantasy). The first category includes historical sciences, among which is history of art. The second category includes knowledge that is based on creativity (imagination), to which the philosopher refers poetry. The third

category is the most varied one and is dedicated to philosophy. F. Bacon divides it into two parts, i.e., “Of the Interpretation of Man” and “Of the Interpretation of Nature”. The latter deserves a special attention. Among practical and theoretical sciences about Nature, F. Bacon identifies a group of applied sciences related to mathematics, including cosmography, astronomy, music theory, perspective, architecture and theory of machines. F. Bacon interpreted architecture as an artificially created and ordered part of Nature and perceived it as a system of interconnected elements. Also, he considered a person, architectural environment, natural environment and space along one line. The philosopher had conceived by that time and created a system of a consistent spatial development. In F. Bacon’s scientific views there exists one feature that became the basis for the understanding of the process of development of architecture, and especially, of urban science development in England in the 17<sup>th</sup>–19<sup>th</sup> centuries. In “The Doctrine of Method” he wrote: “For the art of architecture is not only construction of a building, but also the shape of its elements. The method is a kind of architecture of science. Bacon’s inductive method coincided with the traditional way of architectural and urban conception of England of that time. Therefore, ideas of a perfect city were not popular in England. The family home was seen as the primary element of the environment surrounding a person, regardless of whether the house was located in rural areas or in the city. Firstly, preference was given to fresh air, water, a wood, a scenery, whereas the proximity to business life to the market and good roads came as the second. Bacon’s speculations on suburban housing were connected both with function and the surroundings. In a special section, “About the Gardens”, he expressed his views on landscape architecture: “In the course of time when human civilization would develop along with the taste for the exquisite, people will learn sooner to build beautifully than to plant wonderful gardens; therefore, it means that cultivation of a garden is a more delicate matter and requires more perfection” [2, p. 10–12]. In the description of an exemplary garden Bacon actually drew a prototype of an 18<sup>th</sup> century landscape park. Though, preferring regular gardens of the Renaissance period, F. Bacon kept in his park in front of his house a central fragment with straight alleys. However, his attention is focused on a lovely description of the green space surrounding the house, as well as on the wild heather curtain: “... what concerns the wild heather curtain, which is the third part of our area, I would like to see in it a wild corner of Nature, free from any human activity”. In other words, the idea of a naturalistic composition of the park was expressed by the philosopher quite clearly. Of great interest is F. Bacon’s description of the image of a city as his imagination.

## 2. Basic Theory Part

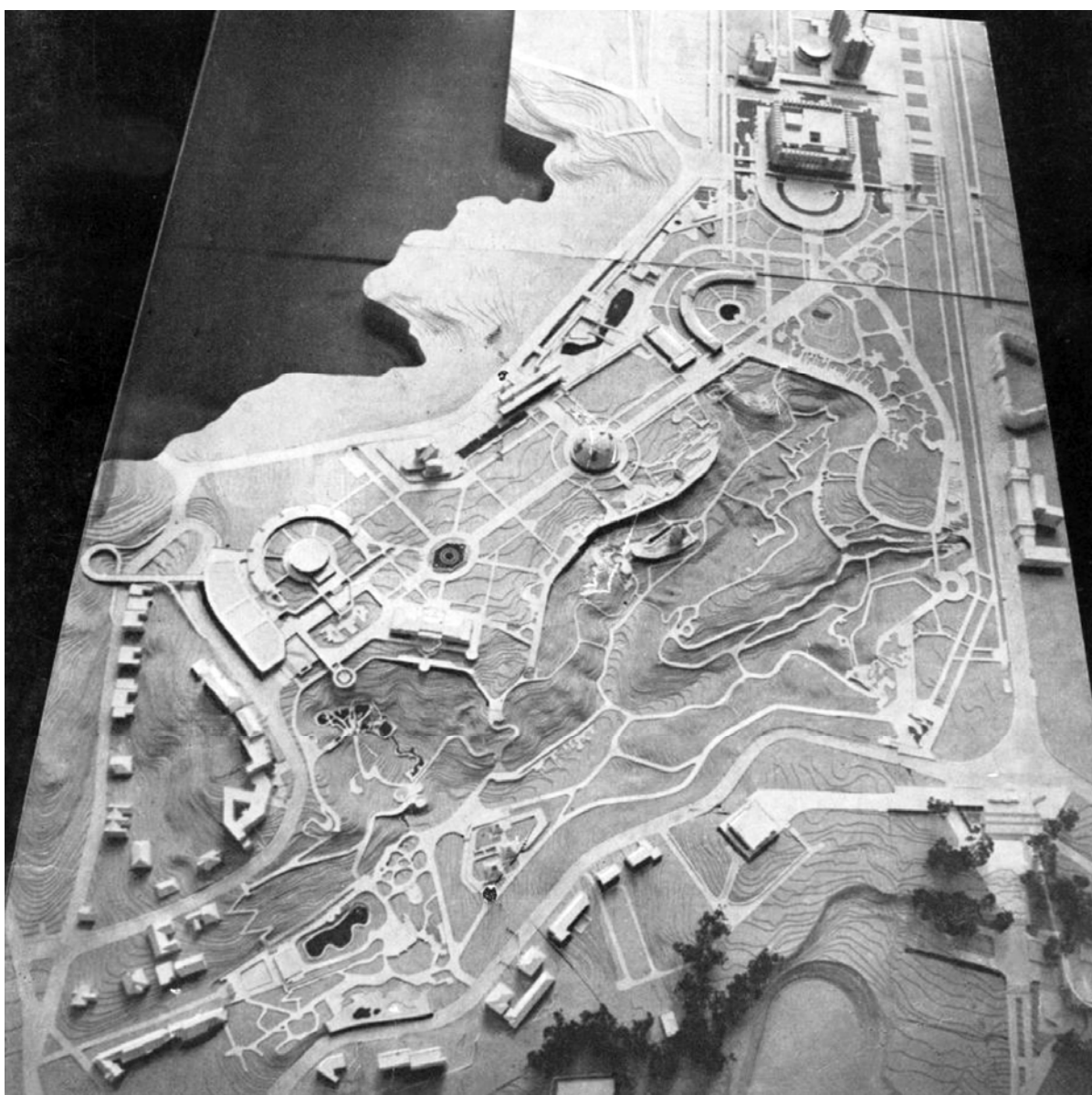
In the study of urban architectural and spatial composition John Roskin’s (1819–1900) idea about “compositional pauses with the emphasis on details” is especially valuable. He came to a conclusion that the function of such pauses in the city can be performed by gardens and parks, as well as areas with a reduced buildings density or by other areas without buildings. Here is his quotation: “the Earth is a great heritage that belongs to us as much as it belongs to those who will come after us, so we do not have no right to plunder it” [2, p. 52]. “Nature is never fully understood it is mysterious and versatile”. These words perfectly correspond to the aesthetic ideal of the 19<sup>th</sup> century. According to John Roskin, integrity of the natural frame and that of the planning structure are so strongly rooted in English urban building that it makes us pay more attention to the research methodology of an artistically whole landscape. He introduced the concept of historical landscape. The most valuable part of his doctrine is his recommended sequence of urban perception: starting from visual impressions of the city and passing on to a more conscious penetration in its landscapes, whether urban or natural ones. In the same sequence from the general to the detailed space orientation should take place: from geography to urban planning of a street network; from a great historical epoch to its individual time periods, from the total compositional characteristics of buildings or park complexes to its indoor architecture [2, p. 52–56].

Architectonics of urban planning, reflecting the peculiar character of urbanization processes of each epoch of a certain time period, also reflects landscape architecture, improving or correcting the architecture of the Earth’s natural frame according to the characteristics of each of its dimensions according to human needs. This applies to both large-scale natural and territorial complexes and systems and separate local formations.

A. Röhring’s cooperation with Ju. Zachariwicz in formation of urban planning conception of the development of Lviv, the necessity to work out a new construction status, aesthetization of squares, gardens and parks in the city did not go in vain, especially his thought: “... the world has a mathematical structure ...”. Which confirms the fact that also the natural frame of Lviv and its components is not an exception. And that the valley of the Stryiskyy park with its springs, streamlets, meadows and hills, all the natural “bel vedere” sights, were harmonized with when laying out the park by A. Röhring.

In the 1877–1894 of the 19<sup>th</sup> century A. Röhring, felt the secret of Nature’s beauty in the valley of the Stryiskyi spring selecting this space for the laying out of the Kilinski park, today known as the Stryiskyi park. Laid out according to the motifs of romantic park compositions and Historicism existing at that time, which preceded the Lviv Secession style, the Stryiskyi park was considered at that time to be the most exquisite park not only in Galicia, but also in Europe.

At the end of the 19<sup>th</sup> century after 100 years since the park’s foundation, a need rose to develop a research program of its compositional structure with the aim to determine directions of restoration and reconstruction. In the process of the park’s compositional analysis the essence of compositional structure of the park’s landscape, both of the valley space and of its upper terraces, was discovered. The afore-mentioned analysis was based on comparing the topography of the park plan of 1894 with the exact topography, including configuration of trees, the relief and the planning structure of the end of the 70–80-ies of the 20<sup>th</sup> century (on a scale 1: 500). It turned out that when planning the compositional axis of each visual space used as a basis the natural rhythm of the valley space proportions of the Stryiskyi spring. This method applies both to the structure of park landscapes and enclaves of green areas of parterre gardens and green “rivers”, including the park street as an avant-zone of the main entrance to the park.



**Fig. 1.** The model of the Stryiskyi park in 1980.

Photo from the cover of the journal “Architecture of the SSSR”, No. 12. – 1980

The analysis revealed that each segment of the longitudinal axis line of the space coincides with the natural direction of the valley line. A shift is found at the intersection of the transverse compositional axis, fixed by the elements of plant forms, relief fluctuation, often artificially emphasized by the author's intention. For example, it can be seen in form of a belvedere or water surfaces and spring sources, sculptures, and art details. The frequency of such transection rhythms coincides with the frequency of watershed lines of the relief. The modulation range of the space evidences the existence of several mathematical levels of scale dependence, namely: the **module of the circle with the diameter of 130 m** [3].

**The first circle** is the space of the park street with the center at a barely visible shift in the middle of the street (radius of the circle 65 m). **The second circle** is the module from the main entrance arcade to the peninsula with a weeping willow over the water parterre with a swan pond with the center, fixed by, the once trimmed forms of hornbeams on the grass parterre with forms of pyramidal shape oak-trees in the background. The center of the radius of the second circle goes through meadows on the slopes, fixed with a white poplar on the left side and with a beech-tree on the right side. **The third circle**, spans from the peninsula to a two-story pavilion-restaurant with the center, where the monument to Jan Kilinski stands (made by J. Markowski), and passes through the center of the oval details composition of the decorative parterre in front of the monument. There is a wooden arch of 1894 and the pavilion-restaurant designed by J. Zachariewicz.

Of interest is the fact that the modulation of the spatial structure of the park is mathematical in proportions (130; 65; 32,5; 16,25). It coincides with the rhythm of the structure and geoplastics of the relief, i.e. the natural frame of the Earth, close to the Golden Section. Therefore, it is so pleasant for people to walk there. The module of the squares net is one quarter of the diameter of the circle and it equals 32.5 m. The module of the net of diagonal squares is formed around the main axis of the visual and compositional space. The diagonal of the rectangle of two squares determines the direction of connection of parterre gardens with the valley of green rivers with a large belvedere and artificial ruins as major elements of romanticism. The longitudinal compositional axis of the lower parterres is enhanced with a blue fir-tree in front of the pavilion-restaurant. From the first floor of the latter one gets a back view on the swan pond water parterre, the grass parterre, main entrance arch and the villas panorama on the Skalka Hill.

The diagonal longitudinal axis between the small belvedere and the plateau with the pavilion-restaurant forms a transition-passage from the low parterre gardens on to the central glade and then to the meadow parterre. A group of beeches completes the composition. In this place, three artificially formed belvederes appear, complemented by some natural ones leading to the valley of green rivers and artificial ruins with a belvedere of reverse visual connection.

There is a completely different modulation of the upper terrace of the General Regional Exhibition with a linden alley "CORSO", designed according to the neo- baroque compositions with the space modulation of 100 m the same as it is in Versailles. The first situational plan of the exhibition was made by A. Röhring in 1892. The program of the exhibition scenario included expressive principles of the integrity and interaction of architectural styles, monumental and decorative art, such as sculpture and landscape art. The compositional planning character of the exhibition's layout was based on the motifs of Baroque gardens of André Lenotre of French Classicism (the 17<sup>th</sup> century).

The scenario of the plan was based on the contrast of Romantic motifs of the composition of lower parterre gardens of the Stryiskyi park with its serpentine belvederes on the park slopes. From there a panorama of the city and of the High Castle opened.

A. Röhring turned the area of the exhibition in a permanent luxurious exhibition of flower and water parterres.



**Fig. 2.** Compositional and spatial model of Stryiskyi park and scape structure.  
Research work by T. Maksymiuk at the end of 70s – beginning of 80-s of 20-th century

### 3. Conclusions

The compositional analysis helps to understand that the Romanticism style of Lviv school of landscape art of the end of XIXth century emphasizes the beauty of natural landscape, and its originality.

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*Тетяна Максим'юк*

### **МОДУЛЯЦІЯ ПРОСТОРУ В КОМПОЗИЦІЙНОМУ ЗАДУМІ СТРИЙСЬКОГО ПАРКУ АВТОРСТВА АРНОЛЬДА РЕРІНГА**

*Анотація.* У статті представлено модуляцію простору, використану Арнольдом Рерінгом під час закладення Стрийського парку, ґрунтованого на натуральному ритмі пропорцій долинного простору Стрийського потоку, що проявляється у композиційній структурі паркових краєвидів, картин, анфілади зелених зал-партерів та зелених рік і долин.

**Ключові слова:** модуляція простору, Стрийський парк, композиція парку, Арнольд Рерінг.