

Architecture, Propaedeutics and Language*

Alexander Rappaport

Scientific Research Institute of the Theory and History of Architecture and Urban Planning
 Branch of the Central Scientific-Research and Project Institute of the Construction Ministry of Russia
 Moscow, Russia
 E-mail: papardes@gmail.com

Abstract—The education system in architecture will undergo serious changes in the near future. The process of restructuring the whole body of architecture will take more than one century, and in this process, the profession itself will face the restructuring of habits acquired by architecture. These processes will require a sharp increase in moral reflection inside and outside the profession. All this will put architecture and architectural education in a fundamentally new position, to which architecture is not ready today. The article presents the points of resumption of the strength of architectural thinking.

Keywords—*propaedeutics; architectural thinking; the reflection of an architectural profession*

I. INTRODUCTION

The theory of spatial composition or architectural propaedeutics which is widespread today was invented in the avant-garde schools of the early 20th century — Bauhaus and VKhUTEMAS. In the 30s in the Soviet architectural universities it was canceled, to be later returned to the program in the 60s. I began my studies at the architectural faculty of LISI in 1959, when it had not yet been returned, with the "Introduction to Architectural Design" course, usual for academies of that time that is, with the washing of the Doric capital. Neither I nor my fellow students have ever complained about the lack of the propaedeutics and when I read today about its usefulness, I can not believe in it, but the question of whether it makes harm or not remains unclear. And if it does, the harm is not dramatic, so it is preferred to be saved in the courses of some (though not all) architectural and design schools.

It seems to me that its preservation in the programs of architectural education is caused simply by the desire to somehow reinforce the impression of validity and theoretical completeness of the course of architectural education to make it look more academic and scientific.

This discipline allows establishing appropriate departments and even getting scientific degrees, which

*This paper was funded by the Science and Technology Development State Program of the Russian Federation for years 2013-2020, Program of Fundamental Research of State Academies of Science for years 2013 – 2020, within Program of Fundamental Researches of Ministry of Construction, Housing and Utilities of the Russian Federation and Russian Academy of Architecture and Construction Sciences, the Research Project 1.4.6.

creates new places for the teachers.

In my opinion, this practice was caused by the fact that modern architecture has not been able to develop its own theory and propaedeutics are trying to mitigate this sad fact.

In the context of the beginning of the 20th century, it is easy to justify its appearance with the desire to bring architecture out from the influence of styles that were not considered appropriate to the spirit of the time — both in the field of new construction techniques and new spiritual needs of citizens.

Today, this story is beautifully described and documented in the works on the history of architecture.

The situation of its occurrence in the context of the architectural program of the avant-garde and in the process of detecting defects of the avant-garde programs themselves remains less comprehended.

II. WAYS OF DEVELOPMENT

The battle against historical styles in the context of the early 20th century assumed that the rejection of historical styles meant a radical expansion of the creative search for new architecture and its artistic forms, not constrained by technical backwardness and ideological doctrines. Neither usefulness, nor strength, or beauty as the principles of the ancient theory of architecture, did not require the style. In those days, architecture seemed to be the ideal of freedom to innovate and the progress of architecture as an art.

The similar freedom from historical styles was offered by painters.

When in the USSR the avant-garde style was criticized and style forms in architecture were returned — propaedeutics remained as some kind the universal basis for them.

This point of view was based on the general philosophical and scientific search for universals as elementary properties of form, similar to the periodic table of chemical elements of Mendeleev, and later elements of the structure of atoms. In linguistics, the main phonetic and grammatical bases of language and speech were revealed simultaneously.

It was not noticed that those elementary properties or elements retained their place in the language below the levels

of meanings and words. Propaedeutics did not build those words and canceled styles in which those levels of meaning were normalized.

Much later, when the theory of architecture began to look for new ways of development, based on linguistics — it never managed to recreate the semantic or vocabulary level of the architectural language, as neither propaedeutics nor other versions of this theory gave it.

Those higher levels of the language in modernism and the avant-garde were considered the prerogative of the creative freedom of the architect to invent forms. So the first experiments of the new avant-garde and modernist architecture were the inventions of individual authors. This creative freedom therefore acted as "freedom" by the reason that it did not give any norms of its own existence.

And only in the criticism of the modernism and the new ideology of postmodernism, this freedom was criticized as a kind of artistic infertility forcing to imitate and not leaving room for absolute freedom, moreover, it has been later understood as the reason for the dull monotony of the new architecture due to the lack of "genius", which was supposed to manifest itself in the architectural creativity free from the styles. The eclecticism that the avant-garde despised returned as the style based on the material of both modern and historical forms.

Propaedeutics did not give much to the history of architecture, which explored just the language of style forms and its changes. The exception, perhaps, is the spatial approach of Wollflin [1]. In the end, the understanding that elementarism is a very limited basis for architectural thought and creativity gradually formed, so a new search for the foundations of an architectural "language" began, which resulted in a significant formula of a radical critique-historical analysis of C. Jencks in his book "The Language of Post-Modern Architecture"[2].

However, there was no criticism of propaedeutics in this book.

In the very name of propaedeutics — "the theory of spatial-volumetric composition" — we see three categories of space, volume and composition.

In VKhUTEMAS the categories of composition and construction were discussed for a long time. The category of construction had no direct relation to "constructivism" which has evolved later. The category of construction has been understood a substantive layer of paintings depicting things, shapes, people, lights and shadows, and the category of "composition" as ways of placing these objects on the canvas — relation of their sizes, angles, the ways they overlap and their relation to the frame of the canvas. These compositional relations could be read as dynamic forces connecting and dividing objects, ways of viewing the canvas by the viewer from one side or another, the distance between objects and between the picture and the viewer.

Thus, the composition introduced the dynamic relationship between objects and the viewer and expressed a kind of the dramaturgy of the picture, the artist's desire to put

the chosen objects into different kinds of conflicts or positions consistent with meanings implied.

The space as a category of composition allowed us to see a kind of a scene in the picture, in which these compositional relationships were played out in one way or another. In some cases, objects depicting things (as in still life) could take the form of flat or three-dimensional figures — as it happened in Suprematism. But the drama and the dynamics of their relationship in the picture often became even more expressive namely due to their subject uncertainty.

As for architecture, the composition could be built on a plane in the planning of a group of buildings or in space, when the volume of structures acted in those relations. From the point of view of a linguistic interpretation, compositional relationships were similar to the syntax — that is, the location and relations of the words in the phrase or a sentence. But if in speech those relations are expressed by nouns, adverbs and verbs and their forms and elements denoting the roles of objects, then in the architectural composition those meanings are introduced by the viewer, whose position in space and the way of the perception of relations of "volumes" depend on the place of observation or movement of the observer in space. In any language, this kind of relationship is denoted by a variety of syntactic characters. In architecture, they can only be conjectured by the author or contemplator of the composition. In speech, names of objects of such a dramatic situation give these relations a clear "objective" meaning of conflicts, while in architecture they remain only the schemes of the possible interpretation.

One of the main ideologists of the theory of composition or propaedeutics N. Ladovsky [3] understood space itself is as a material or the substance of volumes bounded by surfaces, or as a space of their compositional relations. This dual function of space gave the architect the freedom of interpretation of his "scenes" and at the same time difficulties in their interpretation, as the "heroes" of a spatial and compositional drama could change their roles depending on the point of view and imagination of the observer.

All these possibilities enriched the repertoire of ideas and embodiments, but also introduced the element of uncertainty to them, as the viewer became a participant in the events.

Later, when architecture became the subject of the theoretical analysis of linguistics, for example, Umberto Eco [4], in an attempt to build a semiotic theory of architecture has found out that situations in architecture are much less certain and open to interpretation than in speech or painting. To some extent, this pure dramaturgy of volumes could create more or less clear dramatic situations in the historical urban environment, where were historical buildings, the objects with their individual faces or roles, but in the abstract compositional work it became either unattainable, or constantly reduced to a limited number of symbolic figures of usually an authoritarian-dominant style, as it happened in the composition of Brasilia by O. Niemeyer and L. Costa.

Sometimes such schemes worked in industrial architecture as in megastructures of hydroelectric dams

(Dneprostroy) or blast furnaces. In residential environment it was too controversial and the contextualist approach in fact had to abandon these gestures of the author's will; but in fact just in mass building, they became the evidence of technical or organizational will.

The omnipotent creative personality of the architect in reality turned out to be the mouthpiece of the dictatorship of power. These compositional patterns were by no means "new" and could be seen in ancient civilizations. In the genre environment of the city they lost their meaning.

But immediately, deeper reasons for the limitations of this creative will of the architect became visible.

After the works of N. Khomsky, who studied languages from the point of view of the relationship of their semantics and syntax [5], it became clear that syntactic systems are not only primary in relation to semantics (as they generate it), but are also rooted in the consciousness and structure of the brain.

These structures which are principally present in all languages of the world, correspond to the main conflicts and informative meanings of human life — including the relations of people within the family, tribe, gender, cults and myths, which allows to translate texts into different languages. And while the number of these meanings is limited, they stay in accordance with each other.

It is still not clear whether spaces and volumes of architecture can correspond to diverse situations in life of people. It is unclear whether the language of architecture, built on the free creativity of these elements of propaedeutics, can be at least to a small extent closer to the reality of human life and culture.

The desire of the architectural avant-garde to build a new world faced the question — whether this new world will be the world of a human being or it will be the world of the "superhuman", or rather — the technology as mechanics and politics. Almost all the builders of the new democratic society faced the same problem.

While a part of the mechanical forms of movement and development could be found in nature — both for living and non-living, in culture, these laws and forms are constantly introduced and implemented in the form of religious and class power.

It is still unclear how the potential languages of architecture relate to the potential worlds of a man and society. But it is clear that there are forms of cultural and social life not only in the form of the genetic memory of the organism, but also as strong-willed institutions of a political and economic will. That is artificial ones. And consequently, the architecture is in the position of either the executor of the requirements of this power, or the highest authority.

III. SENSE AND PASSION

In propaedeutics, the perception of architecture is based not on meanings but on feelings and experiences — sometimes cheerful and active, sometimes monotonous and

depressing. To what extent the language of architecture is addressed to people and to what extent it only reproduces in monumental forms the communication between buildings that play symbolic roles on the city stage is still not clear. It is possible that this range of possibilities is too narrow, but it is possible that in some cases it is sufficient. This question about the history and criticism of objects is implemented within the framework of propaedeutic logic. A significant role is played by the criticism itself, which has the appropriate languages of interpretation or the "translation" of the language of architecture into the language of human relations. And in my opinion, even the current courses of propaedeutics should be gradually supplemented by the analysis of such interpretations and the expansion of their boundaries.

Another direction of analysis of propaedeutics involves the distinction between the concepts of sense and affect.

By affect I mean here the general tone of perception of a situation as euphoria, or boredom, depth or flatness. It is clear that a simple phenomenon of weather brings a lot of affects to the perception of architecture. At a meeting with students of the Leningrad Academy of Arts, L. Kahn was asked what he thinks of color in architecture. Color, of course, was the part of the system of elementary properties of architectural composition.

Kahn answered that — "the Sun is a great painter". The answer is witty, but vulnerable. In areas of eternal twilight, the sun can be a rare pleasure and color can be a very effective way to cause an affect of joy.

Similar issues may relate to artificial and natural lighting, play of shadows or large-scale patterns of paving, which are discussed, for example, in patterns of K. Alexander [6] and N. Salingaros [7].

In such matters we face a new aspect of the artificial and the natural in the semantic fabric of the architectural imagination and theory of architecture one way or another.

If it turns out that in the genetic memory of any person it is possible to find patterns or schemes of understanding of spatial and subject situations that can be used or coincide with the compositional techniques of design, then some step will be taken to understand architecture as a language or protolanguage.

IV. CONCLUSION

It seems to me that for this purpose it will soon be necessary to expand the range of propaedeutic analyses into the sphere of linguistics — semantics and syntax of the description of spatial relations. The phenomena of proximity and the boundaries of their change, transparency and openness, or isolation and hopelessness, monotony and surprise are expressed in many words and expressions that could be remembered and used in the work on the composition.

Exercises of such propaedeutics could not be limited to graphic ornaments or models, but might also include works of texts (poetic and prose) in which these sides of the

composition would convey the characteristic situations of dramatic experiences.

Literature already has experience of this kind — for example in classical texts of G.Bashlar, Y. Lotman, V. Toporov and other representatives of the structural analysis of the poetic text.

Attempts to link this kind of research with architectonics of the text could be the subject of specific exercises in the translation of literary texts into the “language of architecture”. But along with literature music could be a model for such a translation — for example, the classics of polyphony could have been used for this purpose.

There is no place and sense to list all such reverse interpretations of architecture and other arts. It is important that in total they could if not create the theory of “speaking” architecture according to K.N. Ledoux, then at least take an experimental step in this direction.

REFERENCES

- [1] H. Wäfflin. Principles of Art History. The Problem of the Development of Style in Later Art, New York: Dover Publications, 1932.
- [2] Ch. Jencks. The Language of Post-Modern Architecture, New York: Rizzoli, 1977.
- [3] S. O. Han-Magomedov, Nikolaj Ladovskij. Moscow: S. E. Gordeev, 2011. [in Russian]
- [4] Umberto Eco. The Open Work. Cambridge, Massachusetts: Harvard university press, 1989.
- [5] Noam Chomsky. New Horizons in the Study of Language and Mind. Cambridge: Cambridge University Press, 2000.
- [6] Alexander Christopher. A Pattern Language: Towns, Buildings, Construction. Oxford: Oxford University Press. 1977.
- [7] Nikos Salingaros. A Theory of Architecture. Solingen: Umbau-Verlag, 2006.