PLASTIC IMAGE IN ACADEMIC COURSE OF AN ARCHITECTURE STUDENT. ITS ROLE IN THE REALM OF VISUAL COMMUNICATIONS

Irina Portnova, Andrey Razin, Alexander Kalugin,
Department of Architecture & Civil Engineering
Peoples' Friendship University of Russia, Moscow, Russia, irinaportnova@mail.ru

Abstract. The paper offers a contemplation of the plastic image in academic process of an architecture student and its function fulfilled in the visual communications system. This refers to a plastic image similar, in terms of its capacities, to architecture with its actual dimensions and space, rather than illusionary as in graphic arts or in painting. The paper reviews sculptural models that answer art and educational purposes and brings focus on the crucial periods in Russian and European history of sculpture, styles and principles. The work highlights the importance of academic training in the 18th-19th centuries as traditional, time-tested school of professional excellence and truly states that "Sculpture" as an academic discipline contributes to future architects’ fine taste in art and centres around the general spiritual culture. The disclosure of the specifics of plastic communications will form the concept of plastic thinking, without which no conceivable profession of architect, as well as the most actively implement the acquired knowledge into practice, practicing methods and techniques of their impact on others. About this must think architect is a professional, student, teaching the basics of the future profession, not to become isolated only within the framework of the educational process.

Keywords: Sculpture, architectural model, communications, academic system, artistic view.

Introduction. The "Sculpture" presents an essential part of the academic process in "Architecture". It plays a fundamental role, turning as needed basic disciplines in the system of art education. Future architects' professionalism depends upon their theoretic and practical skills acquired in the course of training, including the necessary competence to visualize, analyse and synthesize an architectural image in a spatial environment and to extend it in terms of modern styles and movements. Sculpture presents that very kind of art that actively develops the spatial thinking. The most operational and effective is the perception of actual statuary, because the movement of figures’ volumes and masses in actual space shapes the expressive side of sculpture, directly influencing man’s senses and mood. Boris Wipper goes into particulars of this experience, in which "the viewer’s perceptions of plasticity concentrate to their fullest extent, energize with a significant, fruitful momentum of plastic energy, which never is present with such an absolute intensity in actual life". Volume, as a medium of image content, acts for its direct purpose. Particularly, when the perception of a sculpture goes in succession, from different perspectives. In turn, the light and shade effects create the spatial play of forms. All this helps embrace the plastic meaning of each part and the figure in its entirety. Considering the nature of the sculptural image, the researcher gives his motor energy created by the rhythm of the bumbs and hollows. He continues: "The statue should have a special stimulating, fruitful significant point of the plastic energy, which in reality is never realized with such absolute intensity. The viewer does not just "see" a work of sculpture, but repeating yourself is all the hard work the motor energy that was once experienced by the Creator of the statue. Such concentrated organic energy, this increased sense of the life of all fine arts can give only a sculpture. This property gives the sculpture a huge impact" [1]. This is also true in terms of architecture. The same "motor energy" can be felt in the tectonics of the architectural design, and it is diverse, comes in many style options. For example, the Romanesque design creates the "energy" of the fortress in statics, the Gothic, by contrast of lightness and dynamics. Baroque design influences the feelings viewers with its exaggerated power of the forms and feeling her cosmic. Classicism focuses on calmness, his "energy" balanced, the design is clear and strict. Future architect also understands colours, which is part of the sculptural and architectural image. She studied all the peculiarities and specific features, from the psychology of color perception of different colour groups and to various color models finished architectural works. If a painter, by the nature of their activities largely valued the coloristic quality of the model, the architect evaluates the color of proportionality with the design of the structure. Knowledge of the fundamental laws of color and color harmony will allow him to bring to life stylistically integral architectural image. Keep this in mind the student-architect, studies the laws of color in sculpture.

The attention and thought of an architecture student should be focused on these natural properties of sculpture. Therefore, the actuality of this paper is determined, firstly, by the signification of the discipline at issue, its place in the academic structure, without which the development of future architects' creative potential would be inconceivable, and, secondly, by the dominance of the academic education system that sets an example of a serious step-by-step training. The importance of talking about the art plastic image in our time is largely lost in academic foundations of teaching, reveals the need for its sanctification. The necessity of formulation of this problem is due to the interest in this field of creativity as a necessary guarantor of skill. Meanwhile, the plastic image is not always evaluated properly. Analysis of expressive properties of the sculpture also gives the opportunity to deliver a number of significant issues relating to their specific nature, influencing the person.

Master plastic communications is a challenging task. It is obvious that, first in theory and then in practice we grasp the essence of the question. Therefore, it is advisable to consider sculpture in terms of its significance in the context of history and in the assessment of the present. Such perspective of the problem mostly relates to the fact that today's world is rich in the diversity of studies in the field of different technologies, multimedia devices that have
penetrated the education sector, replacing the old academic practices and methods by new ones, not always corresponding the required standard of professionalism. In the meanwhile, the academic training continues to be comprehensive and the most consistent.

Foreign and Russian authors are guided by it to a large extent, creating numerous guidelines on the sculpture technology, including Robin Peck [2], Lois Slobodkin [3], V. L. Mazovetskaya [4], D. Broydo [5] and others. They believed that the future professional should own the original basics of academic drawing and sculpture, pointed out the significance of specific exercises in training, contributing to the attainment of the art equipment. Sculpture is regarded as a necessary link in the creative activities of the architect and as an independent art (exhibition), each with their own aesthetic qualities. The researchers readily investigate the plastic image of classic eras as a piece of great skill. Specifically, Elise A. Friedland, Melanie Grunow Sobocinski, Elane K. Gazda [6] are looking at the society and history through the lens of Roman sculpture. Allan Marquand and Arthur L. Frothingham [7] investigate sculpture of different historic periods starting from antiquity up to the present day. They are interested in the Babylon, Assyrian, Egyptian, and Phoenician, Cypriot, Etruscan and ancient Greek sculpture, the medieval plastic arts of France, Germany, the Italian and French Renaissance, of the 20th century, modern sculpture in England, France and America. Richard Spilsbury [8] has focused his book on the sculpture of ancient Greece, South Asia and North America.

Let us explain the authors’ keen interest in priceless masterpieces as finest models for the present generation of masters. The plastic image looks yet differently amid new visual communications and mass media. It is undergoing modifications, like art and culture in general, and constitutes a part of learning. This has been well expounded by Oskar Hasdinor Hassan, Shahriman Zainal Abidin, Rafaeah Legino, Rusmadiah Anwar and Muhamad Fairsir Kamarruzaman [9]. *The practical significance.* Specific provisions of the article can be used in pedagogical practice for middle and top management as a scientific framework (programming tutorials), when reading General and special courses, for example, on the theoretical and practical training of further education for students interested in issues of plastic communications. In the environment of growing importance of IT solutions, the plastic image appears to be the most valuable as a direct expression of author’s ideas, style and time. It can be expected that formulation of the problem of its importance would lead to new perceptions and conclusions in the community of intellectuals: educators, cultural specialists, social scientists and art historians.

**Methodology.** The article has applied methods that introduce the single cultural research aspect. Most importantly, the historical-artistic method makes it possible to assess artistic and sculptural qualities of the image of any historic period. The sociological method promotes formation of the ‘world view’ and brings public with its values and ideals up to date. In the field of interdisciplinary interaction graphics, sculpture, architecture an important analytical approach, exploring issues of visual communication, and their effect on consciousness, human thinking, and how they reflect on the world and man's place in the world. This goal promotes a method of imagery and stylistic treatment, which helps to identify the distinctive properties of the visual language of sculpture, to know and understand which is necessary for future student-architect.

**Results and Discussion.** A future architectural image contains all the features of required concreteness; its framework is composed of three-dimensional forms, so similar to the plastic arts. The compositional expression of a plastic image is attained by the proportionality of its lines, forms and masses, by vividness and laconism of a silhouette. These qualities largely shape the architectural image. The importance of sculpture as the fundamental academic field of study, however, extends beyond academic pursuits. The role of plastic image can be measured relying on the creation of a modern academic program system. It is unique in the field of path-breaking visual communications. In the modern world, given a rapid saturation of the life space with new computer technologies that allow modelling any composition and creation of an installation in the most daring and unexpected alternate designs from plain constructive, logically arranged to macrocosmic with a deep philosophic sounding, the plastic image’s artistic aspect proves to be indispensable. This was in times past. Indeed, a simple analogy can be made to such considerate historic style as the Baroque and classicism of the 18th and 19th centuries. At that time, the pompous concepts of the baroque world perception in architecture were replaced by the rationalism and simplicity of classicism. Initially were valued curved, plastically articulated forms of a baroque whorl but later a certain aesthetic standard required the rhythm of parallel and perpendicular lines, strict fair planes, the symmetry of construction itself and a strict subordination of masses system. The communication computer tools today more vividly highlight the patterns of a plastic image, individually shaped up by its creator's hand, the uniqueness of which is tightly bound to his thinking and perception. Ideas and plans in their original form are conveyed in material, a sculpture design, wherein one can easily read the author's ideas. This is what makes an image attractive; it holds lively observations, captured in the direct form. The sequence of steps towards accomplishment of a project can be mostly clearly seen in an academic model, when the stages of creative pursuit are made absolute. A sketch or a drawing, united into the so-called “pictorial manner” [10], reproducing a model as it were immediately in front of a viewer [11], being different only by the extent of fixing the subject, are already shaping in the primary form the artistic vision (and therefore are always highly sought). Historically, the import of these stages had been proved true by architecture students’ practices. A sketch from nature, meant to study thoroughly the subject matter, features a more thorough modelling and work on details, adding the freshness of impression born by sketches and drawings. When the student analyzes the nature, assessing the properties of a real object, for example, Doric, ionic or Corinthian capitals, it is organically presented in order and in the space environment. Sketches, drawings graphics and sculpture help him in this, allowing also to describe the scale of future work. Getting to the image he'd formed coherent spatial image step by step will be implemented in the finished product. The very composition of the model does not
claim to originality of interpretation, and that interpretation can transcend the rigid boundaries of nature. For example, the plastic language, which can be lively, intense, soft, etc. will give the opportunity for imaginative improvisation. Sculptural model, even the student, expressive and boldly interpreted in the material, may qualify for participation in exhibitions. Properties of nature reflected in it appear as a real image of matter.

Analysis of the curriculum, plans and other documentation of the Academy of Arts of the 19th century confirms that problems of necessary study of nature forms had been raised repeatedly in Academy classes: “the Academy, following the idealist prescriptive aesthetics, although not seeking to extend the relationship between education and the reality, at the same time, could not be confined to narrow craft objectives of classroom productions” [12]. N. N. Rostovtsev rated the existing methods of training based on a careful observation and the study of nature as worthwhile material, the foundation for building the new [13]. The scholar assumed the education deteriorated if diverged from the scientific method of obtaining knowledge [14], which the academic school presented.

Therefore, each of the stages presents a definable experience, a body of achievements, and, due to vicinity of the model of interest, is specific, what eventually translates into finalized projects. The timely developed in the academic education commitment to nature together with the analytical vision of a model have contributed to the development of a complete style, so necessary in practical training. In the educational work of our time, it also makes sense to develop emotional sphere of the student, which is a favorable way will find expression in artistic interpretation, it would seem, in the usual academic model.

At the core of the “Sculpture” course lies the system-dedicated principle whereby the corresponding training course is to integrate into the overall process of artistic disciplines and promote architectural creativity. The training is aimed at mastering the methods of sculpture practices. Knowledge will serve as the basis for the development of an architecture student’s cognitive independence, his observation and thinking skill.

In the process, expedient and important is the aspect of studying sculpture’s plastic language, which entails the fundamentals of sculptural composition, different means of image expression, the principles of building tridimensional and relief forms, the basic sculpture techniques and the properties of hard and soft sculptural materials. The idea of sculpture works realized in a material. This question has always remained relevant to artists and researchers as the study of the process reveals much of the structure of the image itself. Addressing sculptural monuments of classic times will be very illustratory during the process. Through the living historic illustration, students can retrace an integrated system of artistic interpretations.

In the history of Russian sculpture of the main stages of formation and development of plastic image falls on the XVIII-XX century, due to features of secular education. In the first half of the XIX century sculpture appeared, mainly in monumental form. Till this time in Russia there was a small porcelain figures. The works were done by artists from foreigners who have not received formal education in a Russian school. Their skill level was dictated by the traditions in the homeland and met the requirements of the Russian official court art of the eighteenth century. In the nineteenth century changed views on the art of sculpture. Porcelain sculpture gradually began to move into the area of arts and crafts, and most have gained increasing popularity. In connection with the production of serious urban problems, monumental and monumental-decorative sculpture of the first half of the nineteenth century was distinguished by high artistic quality. The figures clearly interpreted the silhouette, their plastic had a special significance. Besides the classical Canon art demanded perfect form. It was believed that the fullness of beauty and meaning is best revealed through the Majesty of the image. At the cornerstone of this idea was built all the art of classicism. To give a model as expressive completeness, the master sometimes embellish nature, combining typical and perfect features. The composition of the sculptural image that had a clear volume, were studied in detail. Although, by its nature sculptural composition is not mnogovektornosti (unlike relief), it is limited in the choice of the plot, however, was conceived, clearly organized/ So in the classical style emerged perfectly-sculpted heroes image that became a reality. Herself an academic system of training focused on the reliability of the images yielded results. Masters, who graduated from the Academy of fine arts, good command of graphic and sculptural materials, understand the tone value in the transfer volume and the graph of the real volume in sculpture. By this time the Russian academic school is the best in Europe.

The artists of the second half of the XIX century put forward the principle of composite image, which consisted in the transfer of vital truth of the depicted motive of the plot. These qualities were evident both in painting and in sculpture. The observation and study of the model, this universal approach to the way has been taken as the basis of the creative solutions artists of the second half of the XIX century. Universal material was bronze. For twenty years, from 1760 to the beginning of the 1780-ies – the time of creating the bronze casting factory laid a solid Foundation for the construction of the school of Russian art bronze. Focusing on high quality examples of French bronze sculpture, Russian sculptors successfully learned the properties of this material, putting it development to a new level. They reached in the sculptures of naturopathy – the principle of vision and of image interpretation, which developed in painting in the second half of the XIX century, showing a Mature stage of realism. Coherent system of artistic education contributed to the addition of a sculptural image in the characteristic features, which in time were further refined. Knowledge of the laws of drawing and plastic modelling helped the artists to properly depict the true shape. Not the intuitive way, and with this knowledge and in situ study of artists have reached a high skill.

Students’ conversation with the classic masters, who demonstrated ideal sculptural style, remains relevant to modern architectural practice as a certain methodological basis in learning. In the context of the up-to-date visual communications, it is necessary to highlight such asset of the sculpture as volume, tangible and material, that organizes
space like architecture. Future architects are to understand space as not a sort of atmosphere surrounding a construction, but as a dynamic environment, engaged in various relationships with the constructive and plastic mass. “These relationships’ pattern is such that the space plays here an equal with the volume, and sometimes even a more active, visual and plastic role”, writes N. I. Polyakov in respect of the plastic image [15]. Any sculptural model can be contemplated as a future architectural image. They commonness is also possible basing on style that implies the close synthesis of architecture and sculpture. By their own example, identifying the specifics of dimensional and relief forms, students get to know plastic properties of soft materials (clay, modelling clay) in different genres of decoration, applying the balance of architectural and sculptural forms. Penetrating into the sculptural composition fundamentals, as an architectural pattern, they learn to model dimensional forms in space. Working from nature, from memory, as imagined, helps them impart various means of learning, from visual reality to abstract creative solutions. At the end of the course, students are likely to come closer to the understanding of specifics of plastic communications in the field of architectural creativity.

Touching upon the importance of plastic image in a row of visual communications, we should note their common orientation towards the results. From our point of view, the influence of a plastic image on a viewer is more direct and more intense. For instance, in the sculptural and architectural composition, specifically in the plastic interpretation of a model, its main dimensions and in the interpretation of subordinate details, the law of contrasts is of no less importance. Whereas in graphic arts and sculpture the light and shadow form the main contrasts able to identify form and to unite details, in architecture it is the contrast of masses themselves, which are essential, turning the spotlight on tectonics and structures themselves. Students learn the basics of this ‘science’ during their theoretical and practical classes. While working on a project, creating a small-size architectural model, they come across the necessary weight relationship, structure pattern and such. Later, putting their sketch projects into monumental compositions, they will be no longer satisfied with a bare arrangement, but will see to artistic and plastic properties of the crafted character. The exactly found artistic and compositional solution of image is a guarantee of an architect’s mastery, his artfulness to express the artwork’s content.

**Conclusion.** Thus, the study of plastic in the communication, the purpose of which is the understanding of the plastic language of sculptural images in educational theory and practice is a very important process in which the necessary field stage. In the work of the architect it is important at all stages of creativity. It is characterized by directly and emotionally. In an academic environment is an example of serious consistent training. Consequently, the sculpture serves as a certain future projection of an architectural image. Because of its quality structurally similar architectural form. Volume, space, plastic lines and shapes of the structure in necessary connection with each other form an image at the specific characteristics and essential features. Its aesthetic qualities will be refracted by artistic particularities of an architectural monument that often acts as a medium of one historical style or another, and that, in turn, is valuable since it contributes to a future architect’s aesthetic sense. Such model can be exhibited to familiarize viewers with a diversification of architectural and natural surroundings. The plastic model that prioritizes nature, modelling from nature as a convincing testimony of the artist’s regular real-world communication with nature, the most fully highlights the principles of indoor sculpture’s development, including training. We must pay tribute to the classic artists who worked out different modelling techniques and the sculptural style elements, having had an important role of methodology basis for many years.

In sum, while mastering the plastic expressive means, realizing the potential of a dimensional form, measuring oneself up to the experience of the past artists and acquiring their taste, students are expected to be current in a complex process of global modern information systems. In presence of broad video information provided by modern computers solutions, as technology offers an imitation of the reality itself, a man-made plastic image become even more meaningful. Sculpture’s aesthetic qualities, evaluated by students, will be refracted in their future architectural designs by their artistic individualities. Their mastery to perfection has always been in artists’ focus and has been developed in different schools based on realistic methods and artistic traditions.

**Acknowledgement.** This paper is financially supported by the Ministry of Education and Science of the Russian Federation on the program to improve the competitiveness of Peoples’ Friendship University of Russia (RUDN University) among the world’s leading research and education centres in 2017-2020.

**References**


671