

STORY ARCHITECTURAL FORMS

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Abstract: Architectural images express the ideas of society in the language of geometric, abstract forms, therefore it is necessary to correlate architectural form with the corresponding content indirectly, following the principle of the historicity of the created images. Seemingly different buildings can have very subtle connections, preserving a somewhat constant figurative structure, and first of all - symbolic. Architectural forms created by people and for people were a reflection of the worldview system of the era.

Keywords: story architecture, images architecture, architectural form.

Introduction.

Each culture and civilization is characterized by its own architectural forms, conventionally called "architectural brands". It is difficult to say exactly what an architectural brand is. Each specific building can become a kind of "brand" for a culture, and at the same time At present, an architectural brand is a phenomenon typical of foreign architects who replicate their buildings all over the world. In any case, gradually an architectural brand, based on the name of an architect or the name of a cultural era, begins to influence the perception of culture by the general public. The Seven Wonders of the World, Stonehenge, the Pyramids in Mexico, St. Peter's Basilica in Rome, the Eiffel Tower in Paris, the skyscrapers of New York, the Opera House in Sydney - All these are traces on the ground cultural generations in the life of humanity.

The traditionality of the image and appearance does not imply a mechanical transfer of forms and their symbolic essence from one building to another, from one era to another. Each era, each time creates its own images - thanks to changes in the previous features of the same content (utilitarian and ideological-social), the formation of new elements of content, turns in the ideology of society, changes in aesthetic views, the emergence of new materials and production methods.

Architectural images express the ideas of society in the language of geometric, abstract forms, therefore it is necessary to correlate the architectural form with the corresponding content indirectly, following the principle of the historicity of the created images. Seemingly different buildings can have very subtle connections, preserving a somewhat constant figurative structure, and first of all - a symbolic one. Architectural forms created by people and for people were a reflection of the worldview system of the era. It is not surprising that many of them continue to remain a mystery to our contemporaries. We accept and understand many of them, and many, such like Stonehenge, for example, we cannot understand even today [1].

Historically, the content of the concept of architectural form has been steadily expanding. It is difficult to talk about the scope of the concept before the Renaissance, since there is insufficient textual evidence. Suffice it to say, for example, that Vitruvius does not use it at all. But, beginning with the Renaissance, it increasingly enters into common use, and its scope steadily expands. At first, only reconstructions of architectural forms of classical antiquity are attributed to architectural forms,

then, by the end of the 18th century, rational geometric and pictorial metaphors of French architects are included in the number of architectural forms, followed by the efforts of the Romantics, Gothic is included in the circle of architectural forms. In the 19th century, archeology enriches the number of architectural forms with materials from archaeological measurements and reconstructions of structures of ancient civilizations, including the architecture of Asian countries, the Middle East and the New World, after which ethnographic materials are added to them. Finally, already in our century, the number of architectural forms includes all variants of architectural searches of the modern movement, from modernism to postmodernism, both realized and remaining on paper.

Despite the fact that the fascination with science and scientific categories at times pushed the traditional category of "architectural form" to the periphery of architectural thought, it continued to be used by Wednesday designers, by architectural criticism And by stories of architecture . The only one exception was criticism times struggle With

"formalism" in Soviet architecture of the late 1930s - early 1960s. The concept of "form" in controversy those years acquired negative connotation, therefore The authors of the extended theses of the "Fundamentals of Soviet Architecture" tried not to use this word at all, but it is impossible to fight formalism without using the term form.

The concept of architectural form remains at the center of modern theoretical discussions, although it is impossible to find a theoretical model for it. M. Tafuri calls modern architectural forms a "regressive utopia", that is, a means of hiding the insoluble contradictions of late capitalist culture, but he does not explain what "architectural form" is, as a concept that developed long before capitalism. Other authors, who offer a wide variety of theoretical and experimental experiences in interpreting architectural forms, do not do this either.

In the works of Soviet theorists, form was usually considered in opposition to content. But, being necessary in the fight against "formalism," this categorical opposition gives little to understanding the diversity of meanings of this category, its origin and development, and almost nothing to understanding the logic of architectural thinking.

More specific were the historical and philosophical studies of this category, especially the works of M. Mamardashvili on the "transformed forms" of thinking. M. Mamardashvili showed that in the ideas about form constantly knowledge about is mixed subject thoughts and logic thought itself. The law of movement of thought itself, even in Hegel, is not separated from the law of movement of an object, which is why the idea of the identity of being and thinking arises, and the dialectical relationship of form and content in philosophical interpretations was metaphorically presented as something like a snake, from time to time throwing off the old form under the pressure of new content.

It seems obvious that every object has some form. For example, an apple has the form of a ball, and a pear has the form of a pear. The example shows that it is often impossible to call the form of an object by any name other than its own. When speaking about form, we constantly refer to a certain catalog of forms. In the case of an apple, we turned to a geometric concept - a ball. In the case of a pear, there is no such geometric concept, and we can use either very approximate definitions such as "triangle", "cone" or simply name the form pears "pear-shaped".

Materials.

But there is another side to the problem. Does every object really have a shape? Does it, For example, form forest, By to whom We let's go, or some Part water under surface seas. If everything has a form, then what is the meaning of the expression "completely formless"? One has to admit, What form subject belongs Not so many myself subject, how much human cognitive means, thinking. We we

can see V subjects only those forms, which mastered knowledge And thinking V cultural traditions And language. This can be called "epistemological" principle. There Where relevant stereotypes discretion of form No, there We her simply Not we see, Although item before us And V his existence there is no doubt [2].

A form can be expressed through many figures, and each form is unique. It should be noted that one figure can correspond to different forms [3].

Historically, social space is formed and ordered, before in all, through the design and construction of material objects. The architect, builder, and constructor are the central figures through which a certain metric and geometry of the human environment is formed.

Architectural management can significantly determine the nature of people's behavior. This feature was pointed out by Ch. Fourier , T. Campanella , N. G. Chernyshevsky , who believed that the environment (in this case material: way settlement, building layout, interior etc.) shapes a person.

French theorist Le Corbusier expressed the desired relationship of architectural space and its social functions with a very laconic formula - "Architecture or revolution". Of course, in reality this connection is not so straightforward and unambiguous. But it would also be wrong to underestimate it.

The architectural and technical approach to social space allows us to realize one of the main and initial goals of human life - protection from external influences. Initially it was the walls of the dwelling or the city wall that carried out this protection function. Conquerors foreign territories, obviously, well understood the relationship between architecture and conditions of human life, when, putting with the aim of destroying people, swept away the faces of the earth are all obligatory settlements and buildings. Thus, the Romans were completely Carthage was destroyed, and its place is plowed up. Babylon and many other ancient Eastern cities were destroyed in a similar way.

And, conversely, in caring for the revival of the national spirit and social activity, the ancients first of all strove for high-quality improvement architectural environment. For example, the Athenians, after their victory over Sparta in the 5th century BC, founded the Athenian Acropolis according to the highest standards of the time. Alexander the Great ordered the restoration of Stagira , the hometown of his mentor and tutor, Aristotle. One of the first Byzantine emperors, Justinian, in order to strengthen the spirit of his people and the flourishing of their creative self-awareness, elevated architecture to the rank of a state matter and the first art, while granting architects special privileges (exemption from all taxes and duties with a simultaneous high increase in the remuneration of architectural work).

Without stopping to list the fairly obvious forms of influence of material processes on the properties of social space, one can raise the question of the ideal components of social space. The existence of social consciousness and social space find expression in architectural forms. The architect experiences impact in the form of a social order or harsh pressure. The influence of culture, traditions, customs and prejudices - all this somehow necessarily manifests itself in the work of the architect.

Take, for example, the unconscious motives for dividing social space into two areas, one of which corresponds to elite and the other to mass life processes. This also includes the principle of "isolation", which implies limited contacts between representatives of the elite and mass environment. As a result, a wide variety of architectural objects arise, organized in accordance with the principles of hierarchical relationships.

Such architectural objects not only public (municipal) purposes, but also residential (i.e. individual, personal) ones are subsequently replicated with the help of standard design and form their own special environment.

Through specific forms of social space, hierarchical relations, intensifying many times, again interact with human consciousness. They generate, on the one hand, an attitude toward isolation, lack of initiative, contentment with what is available, and on the other, a tendency toward negative social activity, the search for and cultivation of prestigious comfortable conditions of elite groups of society.

The discomfort of this period of development of social space is clearly visible in domestic architecture of the 70s - early 80s. Elite residential and "sleeping" areas in cities, departmental hospitals And children's kindergartens, closed from strangers eye centers are monotonous in layout and extremely "boring" in expressiveness .

The hierarchical principle was also manifested inside the buildings: on the one hand, corridors without recreation areas with hard benches along the walls in many "government" establishments, on the other hand, expensive vestibules, halls, and inner courtyards in fashionable closed- type hotels. All This Not only ergonomic questions, but fixed in spatial forms the norm of value attitude towards a person.

Research and methods.

It has a similar effect on consciousness. urban planning discomfort, dust and noise on the streets and in the courtyards, underdeveloped infrastructure. Cramped conditions and overcrowding are attributes not of communal apartments and overcrowded living spaces, but of public life itself in certain its periods development. Namely During these periods a number of concepts emerged that are not easy to translate into other languages. These include "accumulator" (a spatial element of airport terminals), "dead end" (in urban planning).

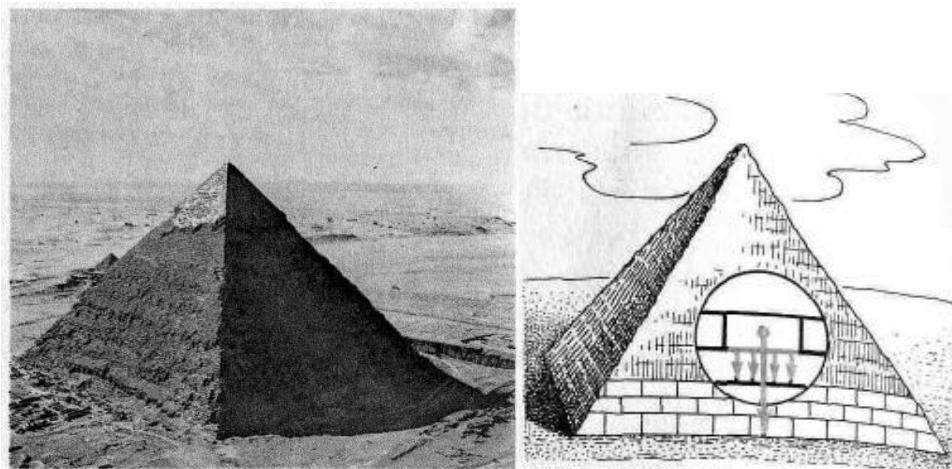
The personal character of social space is expressed in individual and special forms of its material structure. These forms together create one of the necessary prerequisites functioning countries and peoples, social layers and groups of society, various spatial communities of people. For example, the main forms of public space period craft production - (era slavery And feudalism) became: For an individual it is a house, a temple, an agora, a forum, an acropolis, a kremlin, etc., for a society it is a city, a polis, a state, a country, an empire, etc.

For the next, industrial mode of production (the era of capitalism and socialism), other individual and special forms of organization of social space are inherent. For a person, this is an "ensemble of structures," a city, and later a region, agglomeration, conurbation, etc. For societies - first the state, the continent, and later (as This is happening nowadays)— planet And noosphere.

It is important to note here that the planetary and even cosmic phenomenon of life activity man is still far from being adequately expressed by spatial-architectural means. However, it must be said that the spatial description of the human world inspired A. Einstein , V. I. Vernadsky , Teilhard de Chardin, K. E. Tsiolkovsky , and many other prominent scientists. And artists, ahead of architects, have long sought to find the fundamental elements of human space (prouns - K. Malevich , dots - at P. Signac , geometric figures - V. Kandinsky , F. Leger).

The bold experiments with discontinuous human space by S. Dali and P. Picasso became famous [4]. How same evolved space around a person, architectural forms and architectural structures? And they developed in parallel with the development of humanity. With the advent new technologies appeared new constructions, opened new opportunities solutions old tasks, became more complicated Mathematical calculations, But V the basis has always remained the well-known familiar architectural forms - the pyramid, the sphere, the cube. The most important problem of architectural theory: the problem of the relationship between construction and architectural form. The dialectical unity of internal construction and external form is the most important rule education architectural forms.

The design of the ancient Egyptian pyramid is the simplest, strongest and most stable. The weight of each upper block of the pyramid is transferred to the lower blocks across the entire surface. Pyramid shape makes up complete unity With her design. However such design does not create internal volume and, in essence, is not architectural design (Figure 1).



Drawing 1 - Pyramid Pharaoh Cheops Giza. XXVIII V. to n.e.

The simplest And the most ancient architectural design is post and beam system. Its prototype was a dolmen - a cult structure consisting of two vertically placed stones, on which a third horizontal stone is placed (Figure 2 a)). Purpose dolmen to end not clear.

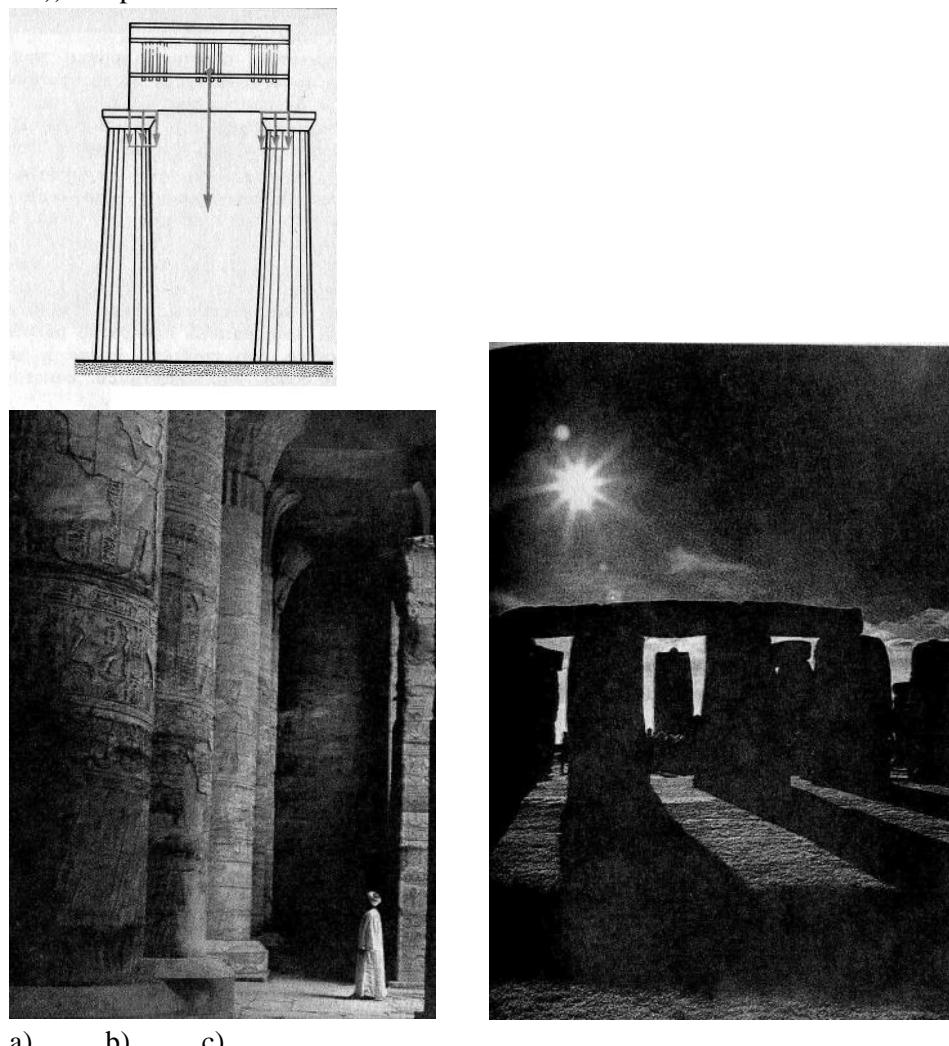


Figure 2 - Post-and-beam construction in architecture. a) Diagram of the action of the beam weight on the supports b) Stonehenge complex (England). XX-XVIII centuries BC c) Temple of Amun in Karnak (Egypt). XV century BC

Over time, the dolmen grew into a cromlech, a structure that apparently served for sacrifices. And ritual celebrations. Cromlech consisted from huge free-standing stones that were covered with horizontal stones and formed one or more concentric circles. The most significant and mysterious cromlech has been preserved in the town of Stonehenge (England) and dates back to the 20th-17th centuries BC. (Figure 2 b)).

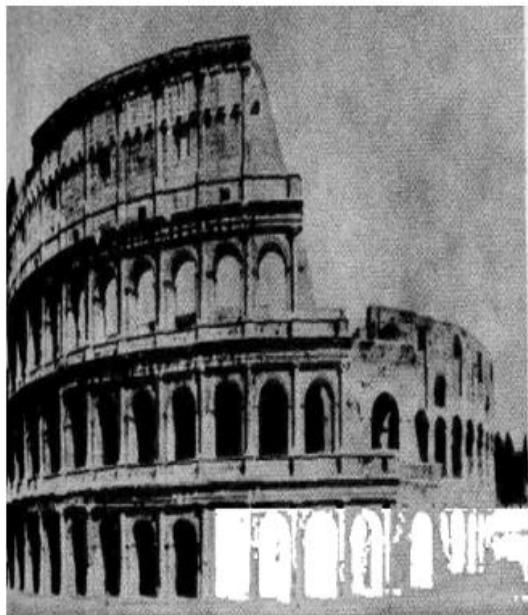
There was left only give stone pole cromlech form lotus or graceful female figure - caryatids (in Greek "girls"), and the post-and-beam structure turned into a work of art. We see such a wonderful transformation in the columns of the ancient Egyptian temple of the god Amun in Karnak (15th century BC) or in the caryatids of the ancient Greek temple Erechtheion on the Athenian Acropolis (421 - 406 BC).

Post and beam design was losing pyramid V sustainability And weight distribution, But she allowed create internal volumes And, undoubtedly, showed up step by step forward.

Results.

The main drawback of such a design was that the stone does not work well in bending. A stone beam with a cross-section of 10 x 10 cm and a length of 1 m 34 cm breaks under its own weight. That is why in temple Amun in Karnak is such a forest of columns (Figure 2c)). But the stone works perfectly under compression. This is a property stone and gave life to a new one architectural structure - an arch, and then a vault.

Originating in Mesopotamia and Persia, the arched vaulted design was perfected by the Romans and became the basis of ancient Roman architecture (Figure 3 d). The arched vaulted design allowed the Romans to build gigantic structures. This is the Flavian Amphitheater (the Colosseum - from lat. colossal; 75-80 BC) - the tallest (48 m) of the surviving structures of ancient Rome, accommodating 56 thousand spectators (Figure 3 a)). Three tiers arches Colosseum are necessary element his constructions and an integral part of its architectural form. Built in 10 years, the Colosseum was subsequently used as a quarry for many centuries. These are the gigantic baths of Caracalla (early III V) And Diocletian (start IV V.) V Rome, could accommodate up to 3,000 spectators at a time. The Roman baths had cylindrical and cross vaults of enormous height, were lavishly decorated with mosaics, sculptures, paintings, had halls for ablutions, massage, dry sweating, gymnastic exercises and even libraries and were similar quicker on palaces. This system arched water conduits-aqueducts (flight arches — from 5 to 25 m; height - more than 40 m, total length - up to 60 km), which have become an integral part Roman landscape (Figure 3 b)). And finally, the pinnacle of ancient Roman construction arts — Pantheon — temple gods (Drawing 3 V, G)). IN "class of stone domes" the 43-meter dome of the Pantheon in the history of architecture remained unattainable. But the Pantheon is not only the pinnacle of scientific and technical achievements of ancient Roman builders, but also a masterpiece of architectural art. The interior of the Pantheon achieved a fascinating harmony between the height and diameter of the structure, which has a simple mathematical expression: the height of the walls of the Pantheon is equal to the radius of the hemisphere of its dome, that is, the entire Pantheon is thrown onto a 43-meter ball. The integrity and grandeur of the Pantheon had a huge influence on many generations of architects.



a)



c)



b) d) e) Fig. 3. Arched-vaulted construction in ancient Roman architecture.

a) Flavian Amphitheatre (Colosseum). Rome. 70-80. b) Aqueduct "City Bridge" near Nimes. France. 1st - 2nd centuries. c) Pantheon. Rome. 123 A.D. interior d) Pantheon Rome. exterior e) Scheme of forces in a semicircular arch.

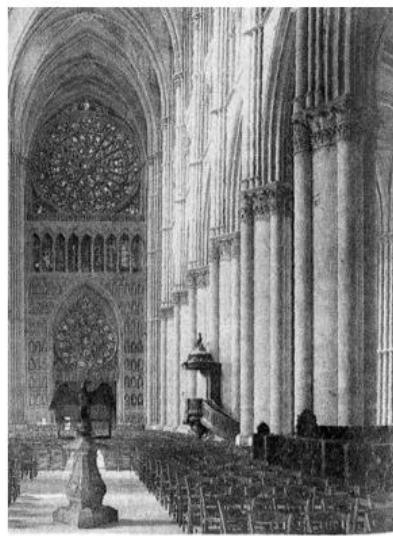
So, arches and vaults made a whole revolution in architecture. From the moment the so-called keystone was installed in the arch, the arch became a self-supporting structure. Therefore, the process of installing the keystone was often accompanied by a religious ceremony, and they tried to decorate the stone itself somehow. Roman arches, vaults and domes were invariably semicircular. Here, apparently, the influence of Pythagorean philosophy, which considered the circle and sphere to be ideal figures, was felt, as well as, of course, simplicity constructions. WITH appearance arched-vaulted constructions V the architecture of straight lines

and planes was replaced by circles, spheres and circular cylinders, which made the geometric language of architecture much richer. However, a semicircular arch or a hemispherical dome gave a strong lateral thrust, which is clearly seen from the diagram of the forces acting in the arch (Figure 4 d)). Lateral forces had to be absorbed by the thickness of the walls and the installation of buttresses, so the thickness of the walls of the Pantheon reached 7 meters, and this entailed a huge consumption of building materials.

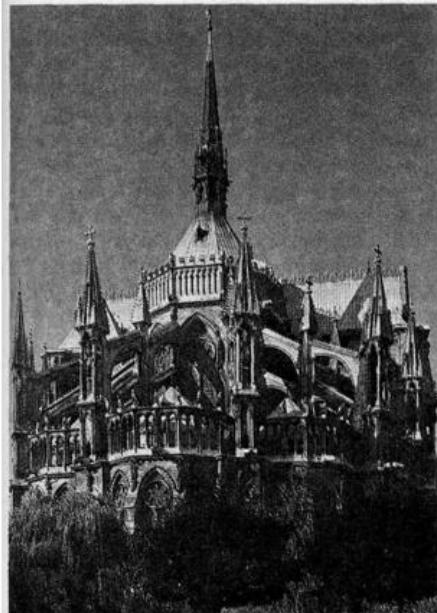
Rome fell, and slavery fell with it. Medieval craftsmen could no longer afford to dampen the enormous thrusts from semicircular vaults with seven-meter walls, since stone was expensive. Together with the Saracen captives, the Crusaders brought the secrets of constructions pointed arches . So new design gave birth to new architecture - Gothic. (Figure 4)



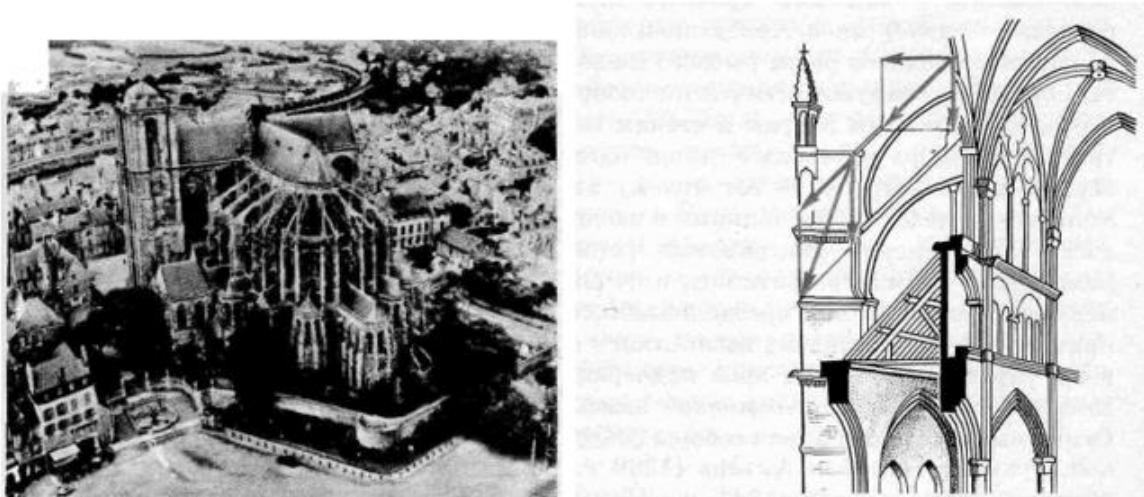
a)



b)



v



Drawing 4 - Gothic architecture. A) Cathedral in Amiens. West facade. 1220-1288. b) Reimes Cathedral . Stained glass windows of the central nave and apse. 1211-1427. c) Chartres Cathedral. Flying buttresses. 1134-1260. d) Bird's eye view of the flying buttresses of Le Mans Cathedral. 1217-1254. d) Diagram of forces in the flying buttress and counterfort.

Pointed arch By comparison With semicircular is more perfect design: it causes less lateral thrust and, therefore, less stone consumption. The pointed arch has a more complex geometric shape compared to the semicircular one, which under construction with one movement of a compass. Like this in this way, by example three designs post-and-beam, arched and pointed - we see that as the design improves, its geometry becomes more complex. Modern architecture confirms this regularity. Pointed arch brought in gothic architecture two design innovations. Firstly, pointed vaults began to be made on ribs - stone ribs that carry independent parts of the vault - formwork. The ribs serve as the "skeleton" of the vault, they take on the main load. As a result, the structure becomes more flexible: it can withstand those deformations that would be destructive for a monolithic vault. Thus, ribs became the prototype of the modern frame structure.

Secondly, side spacer from pointed vault medieval architects decided extinguish not in the walls themselves that support this vault, but outside them. For this, outside the interior space gothic Cathedral were put special supports — buttresses, load on which was transmitted With with help arched designs — flying buttresses. Flying buttresses, like the ribs of a skeleton, they surrounded the outside of the Gothic cathedral.

However, the internal supports and walls of the Gothic cathedral were left with only one vertical load, which is why they could be made thinner and more graceful. Over time, the central abutments of the Gothic temple turned into a bundle of ribs, which, as if having overcome gravity, rapidly rose to the sky. The pointed shape of the arches emphasized this unbridled striving upward. The highest vaults were found in the cathedrals of Northern France: the cathedral in Amiens (1288, 43 m) (Figure 4a) and the cathedral in Beauvais (1347, 48 m). The vaults of the Gothic cathedral seemed to float far in the sky, illuminated by vibrating streams of light from the stained glass windows. Since the vertical load of the Gothic temple was borne by a bundle of ribs, the central walls as load-bearing structures turned out to be unnecessary, and they were replaced with stained glass windows. Gothic structures of the 12th-15th centuries also echo modern architectural structures, in which the load is taken on by a thin reinforced concrete frame, and the walls are made of glass.

The 19th century is the “iron age” in human history: railways and steam engines, the first iron bridge across the Thames (1816), the first glazed metal roofs (like the roof of the Moscow GUM department store), metal domes that quickly broke the unattainable ancient Roman records, and metal spans that exceeded the 100-meter mark by the end of the century. In 1889, for the opening of the World Exhibition in Paris, the famous Eiffel Tower was built according to the design of the French engineer Gustave Eiffel (1832-1923). It immediately doubled all records for overcoming heights, soaring upwards to 312.6 meters. Thus, the longest-lasting record in the history of mankind was broken: after all, the pyramid of Cheops remained the tallest creation of human hands for 45 centuries.

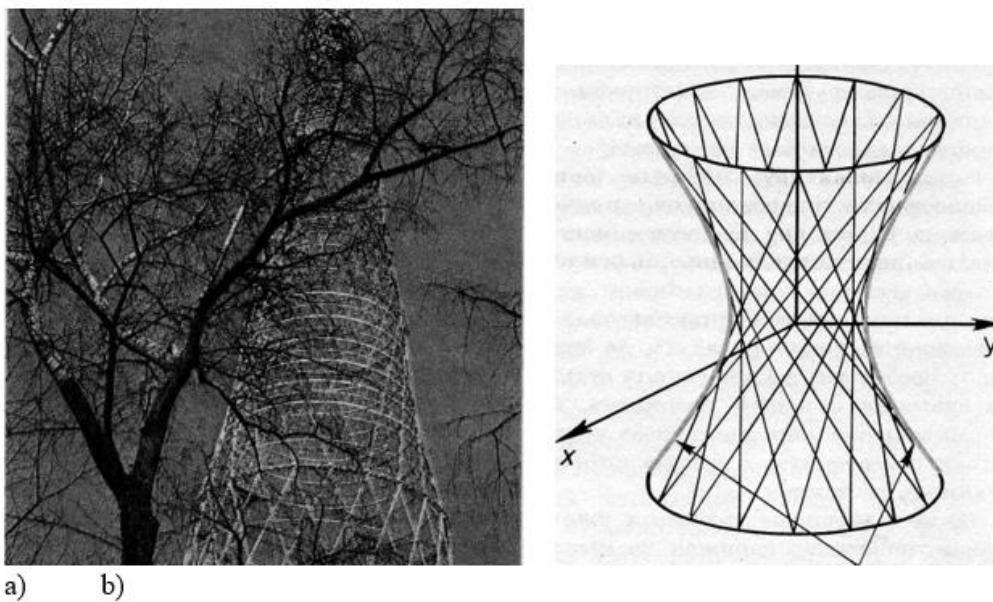
Discussion.

What brought immortality to the Eiffel Tower was not its design, which today seems archaic, but the proportionality and harmonious unity of its forms, i.e., precisely what makes a building structure a work of architectural art.

The "Age of Iron" in architecture turned out to be short-lived. With the new 20th century came a new unusual material — reinforced concrete, committed genuine revolution V architecture.

"The first martin" new architecture appeared in 1903. This was residential house architect O. Perret in Paris - a reinforced concrete frame with large glass openings. Perret proved that the construction houses from bricks And stone With massive walls not necessarily. Thus began the "age of reinforced concrete." Reinforced concrete opened up unprecedented opportunities for architects: it was cheap, had the necessary strength, and could be continuously to pass from one form to another. It is not surprising that architects were in a hurry to test the new material on ceilings, the construction of which has always been one of the most important technical problems. Shell ordinary chicken eggs was For architects standard strong and lightweight construction. The ratio of the diameter of a large chicken egg to the thickness of the shell is on average 130. This ratio between the diameter of the span and its thickness seemed unattainable. For example, for the Pantheon in Rome it was 11, i.e. an order of magnitude smaller. And now the reinforced concrete "shells" overturn all traditional ideas and leave the records of the chicken egg far behind.

Construction reinforced concrete coatings required formwork, retaining liquid concrete and giving it a better shape. The formwork is most conveniently made from straight boards. The simplest surfaces formed by the movement of a straight line in space and called ruled surfaces - cylinders and cones - have been known for a long time. Even the ancient Romans built cylindrical vaults. Other ruled surfaces were suggested by mathematicians, who discovered two more types of ruled surfaces: a one-sheet hyperboloid, a hyperbolic paraboloid. They are formed by two families of straight lines in space. (Figure 5 b))



Drawing 5 -. a) Shukhov Radio Tower on Shabolovka. Moscow 1922. b) Ruled property of a one-sheet hyperboloid

Architects took advantage of the discovery of mathematicians. Cooling towers, devices for cooling water with atmospheric air, have the shape of a single-sheet hyperboloid. The linear property of a single-sheet hyperboloid is the basis for Shabolovka's design radio towers V Moscow, built By project wonderful Russian Soviet engineer, honorary academician V. G. Shukhov (1853 - 1939) (Figure 5 a)). The Shukhov Tower consists of from several delivered Friend on other parts single-sheet hyperboloids, each part being made of two families of rectilinear beams joined at their intersection points.

If the single-sheet hyperboloid pays tribute to the "usefulness" in architecture, then the hyperbolic paraboloid (architects call it by its beautiful abbreviated name hypar) thanks to his expressive And elegant serves as a form "beauty". The architectural possibilities of hypar were discovered by engineer Felix Candela, a Spanish patriot who fought against Franco's fascist dictatorship and was forced to emigrate to Mexico in 1939. Candela

brilliantly demonstrated the expressive properties of hypar on various structures, from industrial buildings to restaurants, night clubs and churches (Figure 6 a)). These functionally dissimilar structures had one thing in common: in them, the mathematical surface became a work of architectural art. The linear property of hypars allows them to be cut along rectilinear generators and to compose exotic structures from several hypars . This is exactly what Le Corbusier did in 1958, when he built the bizarre Philips pavilion at the International Exhibition in Brussels.

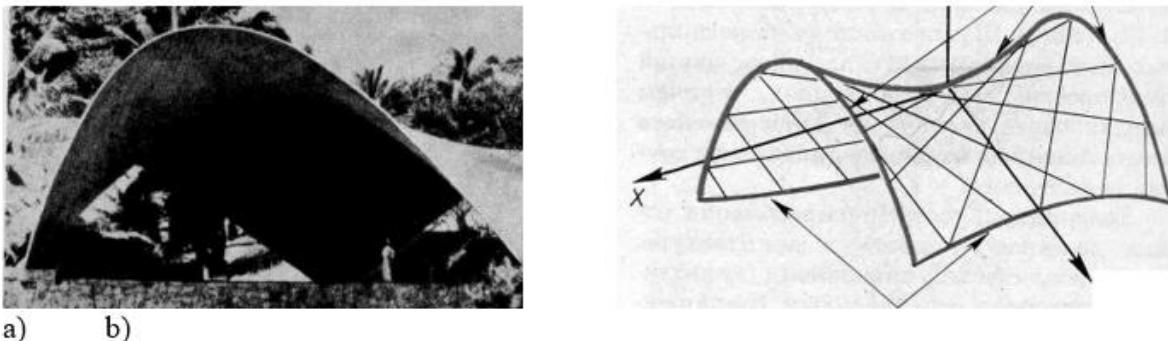


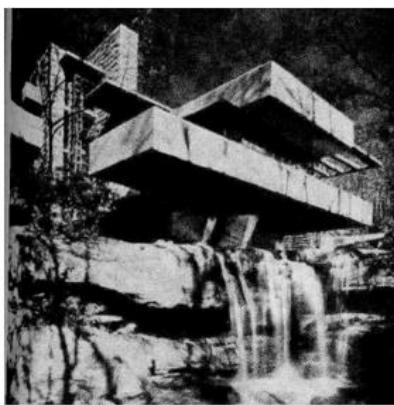
Figure 6 - a) Evening Hall in Acapulco. Mexico. Architect Candela b) Ruled property of a hyperbolic paraboloid

No one from species arts So closely Not connected With geometry, How architecture.

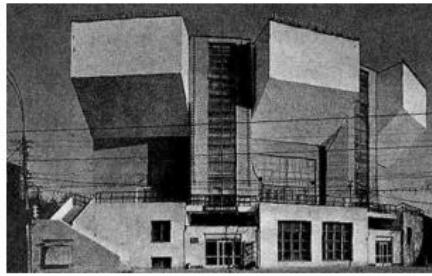
"The environment us world — This world Geometry clean, true, flawless V our eyes. Everything around us is geometry. Never do we see such forms as a circle, a rectangle, corner, cylinder, hypar , completed With such thoroughness And "so confident." These enthusiastic words about geometry belong to Le Corbusier. But unlike "abstract", "mathematical" geometry, "architectural" geometry is filled own aesthetic content. Case V volume, What images

"mathematical" geometries are incorporeal: they have no thickness, no weight and therefore are free hover in our imagination. It's a different matter — images of "architectural" geometry. They are created from a specific material: they are weighty, they live in the field of gravity. We can turn a geometric figure, for example a pyramid, in our imagination in any direction - its properties do not change. But mentally turning the top down the pyramid of Cheops, it will start to sway from side to side. The reason for this is obvious: the pyramid of Cheops is affected by gravity even in the imagination. And in order to ensure immortality for his structure, the ancient Egyptian architect brilliantly embodied in the stone pyramid the most important rule of stability and strength of the structure - expansion downwards. Thus, the pyramid in architecture naturally became the personification of stability, strength, eternity and peace. This is its aesthetic content. The artistic expression of the laws of an architectural structure or construction is called architectonics or simply tectonics. It can be said that the pyramid is a symbol of the tectonics of all classical architecture.

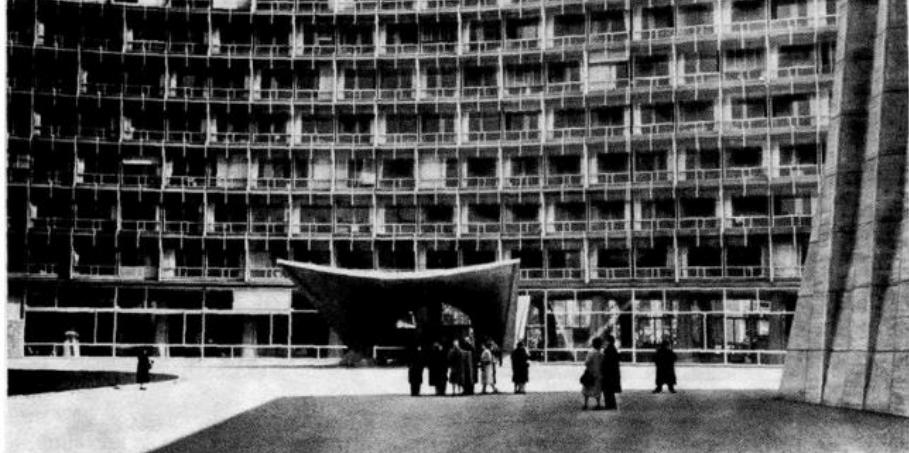
Modern architecture has challenged classical tectonics. Having received in its using particularly strong construction materials, it seeks to turn the "pyramid of architectonics" upside down. Modern architecture, as if having overcome the forces of gravity, hovers in the air. Mankind has always dreamed of light, airy architecture, and in the 20th century these dreams are taking on flesh. Horizontal planes, as if flying in space ("House over the Waterfall" in Ber-Ran, GA, arch. F. Wright, 1936. Figure 7 a)); giant overhanging volumes (Club named after I. V. Rusakov in Moscow, arch. K. Melnikov, 19 (Figure 7 b)); V-shaped supports that have torn the building off the ground ("Radiant house", architect Le Corbusier, 1952); walls transformed into stained glass windows, through which one can admire the golden domes of the Kremlin cathedrals (Kremlin Palace of Congresses, architect M. Posokhin et al., 1961); the whimsical lines of canopies and vaults-shells in the form of hypaeroplanes (Church de la Virginie Milagrosa in Mexico City, engineer F. Candela, 1955) - all these are signs of modern architectonics and examples of modern architecture that have become classics. All these signs, collected together, can easily be found in the building of the UNESCO Headquarters in Paris (arch. P. Nervi et al., 1957 (Figure 7c)), which was conceived as a symbol of modern architecture.



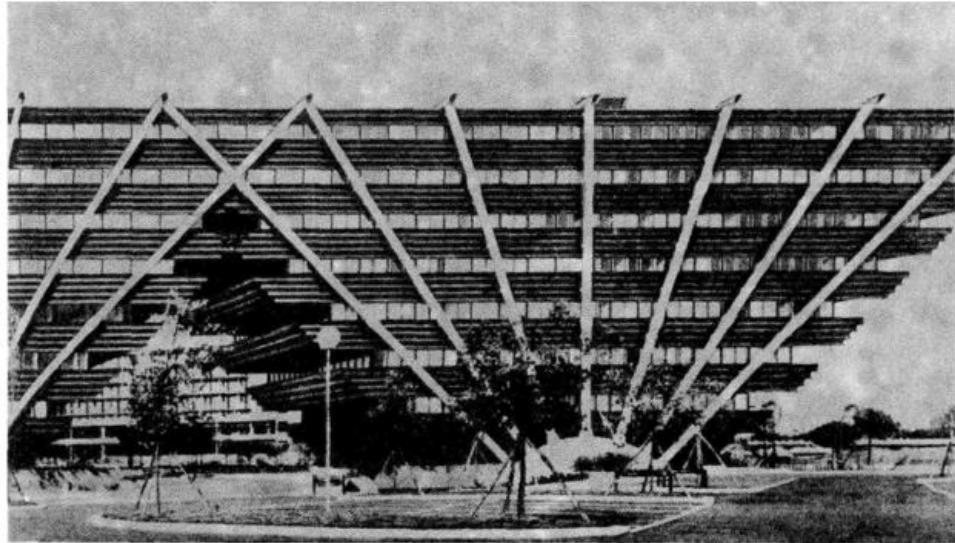
a)



b)



c)



d)

Figure 7 - Modern architecture a) House over the waterfall in Bear Run. USA. Architect F. Rai. 1936. b) Club named after I.V. Rumakov in Moscow. Architect K. Melnikov. 1923 c) UNESCO building in Paris. Architect M. Breuer, B. Zehrfuss, P. Nervi. 1957 d) Building Esso company in Rome. Architect G. Lafunte, G. Rebecchini. 1980

The symbol of modern architecture is the project of the Museum of Modern Art in the capital of Venezuela, Caracas. The project was created by the Lenin Peace Prize laureate, Brazilian architect Oscar Niemeyer and is a huge pyramid of glass and concrete, standing "upside down". Of course, the main thing in Niemeyer's project is the challenge to classical stone tectonics, the desire to express the new possibilities of new architecture in a new, albeit paradoxical form. The right to life of new ideas is proven in Niemeyer's project "by the method of contradiction".

Niemeyer's project remained unrealized, but his bold tectonic ideas bore fruit. The Esso building in Rome, built in 1980 by architects G. Lafuente and G. Rebecchini (Figure 7 d). The building resembles Three pyramids at Giza, turned upside down "with legs"; it clearly echoes with famous project Niemeyer, Although structurally solved in its own way. The fan of steel supports is the structural and emotional core of the building, which resembles, rather, not a house, but some kind of complex mechanism. Thanks to new tectonic ideas, integrity And geometricity all compositions building "Esso" makes a strong impression, although, of course, it stands apart in the architecture of the second half of the 20th century [5].

The symbols of New York are the skyscrapers rising to the clouds (Figure 8). New York culture, due to its relative youth compared to the Old World, was not overloaded with stereotypes of behavior and generally accepted decisions, and therefore easily accepted the new, turning the newly created typology into a norm. The invention of the elevator and the improvement of metal construction removed technical restrictions on height buildings. And although the first high-rises were built in Chicago, it was in New York that they gave birth to an entire architectural genre.



Drawing 8 -Skyscrapers New York

Conclusion.

Skyscrapers began to act as symbols of the company's prestige, their owners competed for the honor of having the tallest building. From the beginning of the appearance of high-rise buildings, their shape was associated with the concept of a tower - and they actually became towers. They looked like several buildings with traditional facades, erected on top of each other. From the "archive" of the classics, architects borrowed what they considered to be the closest motif to the idea of a skyscraper - the motif of a column. They organized the volume like a classic column with its division into a base, a trunk and the crowning. This three-part column scheme was still acceptable for buildings up to 20 storeys high, but taller buildings did not fit into this scheme. Therefore, the skyscraper gradually began to move away from the traditional appearance, giving birth to a new architectural type, noticeable in the urban space and playing with industrial metaphors.

Corbusier, expressing his opinion about New York's high-rise architecture, expressed himself quite eccentrically: "It is a disaster, but "a beautiful catastrophe." For a European accustomed to a horizontal landscape, skyscrapers are associated with mountains

Architectural forms were schematized to the limit, striving to approach the simplest grids and networks of space divided into squares. After the modern movement declared war on historical styles in architecture, including classicism, the concept of an order as a system of architectural forms was consigned to the "archive". But With arrival postmodernist eras, like to that, How on place myth V culture came "encyclopedia", the function of the order began to be performed by the "catalog" of possible architectural forms. The normative system gave way to free choice and the search for a new original form, at least within the framework of a given genre - skyscrapers. And the "traditional" New York high-rise, having reproduced a lot of similar things, helped to make a shift in architectural consciousness. Architects began to play not with the norm, but with the form of skyscrapers, as if rejecting the accumulated archive of ready-made and tested solutions. This is how buildings with broken sides, with their tops twisted into spirals. Thus, from the "traditional" skyscraper that had become the norm, an iconic one emerged. It does not simply rise above the surrounding urban landscape. Its entire appearance makes it clear that it is a building-symbol, fixed in the mind by its form.

Each one culture leaves leave your mark on history in the form of architectural monuments, somewhere simple and naive, and somewhere bold and creative. But in all of them strictly a pattern can be traced: architects attach special importance to beauty, for without beauty, without there is no art of architecture at all, remain only gray faceless buildings. Monument architecture Maybe become fragile And useless (such Now became twenty-two-headed handsome Preobrazhensky Cathedral on island Kizhi — pearl Old Russian wooden architecture), but an architectural monument cannot be ugly, because in this case it turns from a monument into a building [6].

Literatures:

1. Mainicheva A. Yu. Wooden churches of Siberia XVII centuries: forms, symbols, images.- Cultural Heritage: Archive 1998–1999 . - Access mode: www.zaimka.ru/culture/maynich8.shtml
2. Rappaport A.G. Towards an understanding of architectural form Dissertation on competition scientist degrees doctors art history Moscow 2000
3. Chebanov S.V. General morphology Concepts of form in natural science and the foundations of general morphology – Access mode: <http://www.biospace.nw.ru/biosemiotika/main/morph.htm>
4. G.A. Klyucharev Space and time V life human « Philosophy And life. ABOUT man " , Moscow, ed. Knowledge", 12/1991 OCR: BEGALIN A.K., 2004.
5. Voloshinov A.V. Mathematics And art.-M.: Education, 1992.-235 s.:ill . - ISBN 5-09-002705-6
6. Elena Igumnova Between the norm And form ZAART, 22.08.07 - Mode access: <http://www.stengazeta.net/article.for.printing.html?id=3718>