

SUPERGRAPHICS AND VIDEO ECOLOGY

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Abstract: The objective of this research was to conduct a study of supergraphics in the architecture and design of the visual urban environment in terms of video ecology. The article examined the specifics of supergraphics, its relationship with the concepts of graffiti and street art. The study also focuses on the specifics of new materials, innovative technologies for the implementation of supergraphics, in particular on the example of the subway. The variety of artistic techniques of supergraphics and its influence on the harmonization of the surrounding subject-spatial environment are revealed. The demand for supergraphics in modern conditions requires its deep analysis. The specifics of supergraphic tools are related to the requirements of creating an effective communicative human environment and solving a specific problem to improve the video ecology of the urban environment. The differences in the concepts of graffiti and street art are analyzed, their connection

with the artistic techniques of modern supergraphics is outlined. The article provides new materials and innovative technologies. The provisions of the article reveal the inextricable connection of today's trends in supergraphics with our modern life. The materials of the article contribute to further developments in the methodological material on this topic, help in the formulation of design tasks, as well as in the evaluation of the work in supergraphics.

Keywords: supergraphics, video ecology, visual environment, metro, harmonization, graffiti, street art, innovative technologies.

1. INTRODUCTION

Supergraphics is a tool for creating and forming a visual environment. The graphic language of supergraphics complements, enriches the world around us. The modern problem is the transformation of an

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unfavorable environment from the point of view of visual perception into a human-friendly environment. This article explores the effect of supergraphics on the harmonization of our subject-spatial environment. The study also focuses on the specifics of new materials, innovative technologies for translating supergraphics into the metro.

The relevance of the study consists in the systematization of the relevant material, in the further application of scientific ideas about the supergraphics in methodological applications - for setting design tasks, and for evaluating work, for developing educational material.

The objective of art history research is supergraphics, as a means of improving the video ecology of the urban environment.

To achieve this goal, it is necessary to solve the following tasks:

1. analyze examples of supergraphics
2. analyze the factors of negative visual environment
3. establish the positive effect of supergraphics on the negative visual environment

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Supergraphics is considered as an object of research. The subject of the research is the factors of the negative visual environment.

The materials for review were network resources, albums, books on design, and magazines.

2. METHODS

The author used the following research methods: analysis, synthesis, extrapolation, bibliographic methods. A study of a variety of sources of information on the topic of the article. Such areas as graffiti, street art, supergraphics were considered. The methods of analysis, synthesis, extrapolation helped identify their main characteristic features on the research topic. Modern materials related to the latest technologies in supergraphics were reviewed.

Supergraphics in the architecture and design of the visual urban environment was studied from the point of view of video ecology. The comparison method were applied and, as a consequence, a conclusion was made on the continuity of street art. The synthesis method was applied, which helped to get a general idea of the subject being studied. The research methods are



abstractive and generalized in nature. They help to systematize the collected material for its successful study.

Scientific data indicate that a constant visual environment, its saturation with visual elements, has a strong effect on a person's condition, especially on his organ of vision. That is, it acts like any other environmental factor that makes up the human environment. In 2005, two artists – Christoph Steinbrener and Rainer Dempf changed enormously Neubaugasse (project - Delete!) – one of the streets of Austrian Vienna. In 2 weeks they covered all street advertising in the city with yellow monochrome fluorescent foil - film and packed all three-dimensional objects (letters, for example) in plastic. All signs identifying consumption, such as advertising signs, signs, pictograms, company names and logos, disappeared from the street. The result impressed everyone. It immediately became evident how much the streets are polluted with advertising garbage.

Advertising not only spoils the look of the city, but also subconsciously affects its residents [4]. The disregarded and unnoticed information and advertising component of the city is a

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product of our time. The experiment clearly showed that graphic noise is becoming a significant environmental problem.

Video ecology is a scientific field dealing with the ecology of the visual environment and beauty. Video ecology science was developed in Russia on the basis of a long-term study of the mechanisms of visual perception by V.A. Filin [15]. He was the first to examine and describe the visible environment surrounding us as an environmental factor. In fact, video ecology is the science of human interaction with the visual environment. What is the visual environment made up of? The first is nature. The second is architecture, man-made objects.

Universal urbanization creates a negative visual environment: straight lines and corners, dark colors, concrete. Large planes of the same type of windows. Fields, consisting of many identical elements, uniformly distributed, create aggressive visual fields on a certain surface, from which a person gets tired. A homogeneous visual environment with a lack or absence of visual elements is also bad for a person. Unnatural visible environment, violating



the laws of visual perception, leads to mental disorders [3].

The problem of a comprehensive assessment of the environmental friendliness of the visual urban environment is long overdue. Unfortunately, the science of video ecology has not yet developed regulatory documents on the formation of a visual environment. There are no requirements for the permissible sizes of homogeneous and aggressive fields in the architecture of the city. Time is so rapidly changing the visual urban environment and, accordingly, all this exacerbates the contradiction with the possibilities of human vision. The current task is to stop the trend of deterioration of the visual environment in human habitats. A characteristic trend of design and architecture is the desire to design not individual elements, but integral in form visual urban complexes, coincides with the formation of a harmonious visual environment.

The visual field created by the old building is visually pleasing. Long concrete fences, huge planes of glass, rows of identical buildings, equally painted houses cause negative consequences, large glass surfaces are especially aggressive. Aggressive visual

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fields are created by an ordinary simple multi-storey residential building with a large number of windows. Already nine repeating identical elements are considered an aggressive environment for the eye. Homogeneous visible fields create the ends of buildings, industrial zones. The human eye does not like a large number of right angles and edges, an abundance of large empty planes. The more curved lines, the rich color gamut the surrounding space has, the closer it is to the natural environment and, therefore, the better the visual environment is.

The term "supergraphics" in the 70s of the XX century was introduced by the American architect Charles Moore. The traditional concept of monumental painting has been replaced by a new concept of supergraphics. A sign of supergraphics is the obligatory interaction with the three-dimensional spatial form. Despite the independence of composition and its own colorographics, an image that is located directly on a three-dimensional object changes this object and presents in a new way [17].

It is necessary to distinguish between graffiti, street art and supergraphics. Graffiti is a global subculture



and a way of communication within youth groups [7]. Graffiti is a crony graphic, besides it has an illegal basis. It almost always violates the law and is a challenge to society. Writers (artists) do not care whether the townspeople will understand them; they express their own self, their position, their attitude to the world. Graffiti, as a direction, has its roots deep in history. The very word "graffiti" originated in the XIX century from the Italian term *graffito*; it was associated with drawings found during excavations of Pompeii left there on the walls. Graffiti, as a rule, was a personal signature of the author. Graffiti artists draw their tag everywhere. In the 60s America, criminal gangs thus marked their controlled territories and painted the New York subway. Today graffiti is brightly flashy drawings made most often with spray paint.

Street art represents non-commercial drawings, installations understandable to the general public [11]. Street art artists are often unknown to anyone and popularize the idea of free expression or action. This is also not quite legal art. Having arisen in the morning, a street-art object can already be cleaned in the evening by city authorities.

Today, when describing images applied to walls, floors, ceilings, asphalt, or other external surfaces of buildings and structures, people often call them graffiti. And the concepts begin to merge gradually.

The art of supergraphics has a great history. *Madonnari*, street artists, appeared in Italy more than five hundred years ago. They wandered from one city to another from holiday to holiday and decorated streets and squares with biblical motifs.

In the early XX century, in Mexican culture, strong revolutionary works were performed by such artists as J.C. Orozco, D. Rivera, D. Siqueiros. In the XX century, supergraphics owes its formation to various creative directions in painting, design, architecture. It was influenced by the De Stil group, K. Malevich's Suprematism, the development of optical art (op-art), and kinetic art. In the last quarter of the XX century, graffiti becomes part of avant-garde. In the 70s, supergraphics was a method of constructing the visual space of a city. A holistic color image of new areas was created due to their color integration into the spatial, semantic and aesthetic environment of the city, a change in the structural and



morphological basis of architectural forms. One of the brightest street art projects – “Artrium” was launched in 2018. The walls of the Atrium shopping center have turned into a new Mecca of street art on the Garden Ring, thanks to eleven authors of world street art who have arrived in Moscow. Among the most significant names on a global scale are Shepard Fairey, Felipe Pantone, Tristan Eaton, Ben Eine, PichiAvo, Okuda San Miguel, Pokras Lampas, Faith47, WK Interact, Faust, Haculla. They provided Moscow with a worthy place on the world map of the art of urban space. Supergraphics is a solution by graphic means of objects of design and architecture, a new visual embodiment and a special way of enriching the surrounding environmental structures, as demonstrated by the authors of the project [5].

Supergraphics can greatly change the nature of the form, up to the loss of its volume, by visual destruction of the real geometry of the forms, complete visual destruction. She can visually transform an object. But she, as an artistic tool, creates a new compositional integrity. Gives the object a new meaning. Supergraphics can visually transform a single object, and a

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whole complex of buildings, a fragment of the city [14].

Supergraphics is a kind of applied graphics that uses visual techniques that turn a person’s static space or a three-dimensional object into an active and dynamic principle, visually transforming it [13,16]. Today, supergraphics is a fusion of monumental painting, graphic design and an architectural approach to solving space [18]. Graphic design uses not only color motifs, but also geometric patterns to create a dynamic and spatially complex object. The compilation of a colored geometric ornament and the complex structure of an object is a well-known phenomenon in the field of culture. In the twentieth century, this principle received a new development. During this period, the color scheme in painting, art, architecture sounded new, finding a new visual embodiment and a special way to enrich the surrounding environmental structures - supergraphics [6]. If we talk about the thematic content of supergraphic works, there are no restrictions in the given styles and directions. These are classicism, avant-garde, post-and meta-modern, re-modernism, neoplasticism and



neoclassicism, graphic art or Digital Art...

Creative design and artistic manifestation is possible both in abstract and in non-objective art, since nothing should impede the possibilities for the author's design [1, 2].

The authors try using their works to interact with the viewer, immerse themselves in the objects depicted, and go through emotional experience [10].

Traditional genres today are inferior to digital art. Digital painting, digital technologies in photo processing are used in solving works of supergraphics. Of course, it doesn't matter with what help the artist today solves the tasks with a brush or mouse cursor [12]. The processing of digital photographs becomes a powerful tool for implementing the most complex author's design, helping the author to convey a subjective awareness of the surrounding reality.

Supergraphics, the source of which is graffiti and street-art in the form of graffiti, is believed to originate in the New York Metro, and today it is actively being introduced again into the underground spaces. Currently, the metro, as a place for the implementation

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of supergraphics, is one of the interesting spaces of the urban environment. Metro is the most visited place in the city, with huge audience coverage. New technological materials provide new bright, unusual opportunities for the development of supergraphics.

Today, digital art is vitally necessary. It is certain materials for supergraphics in the metro space, where traditional painting is sometimes not appropriate.

One of the most beautiful and original metro in the world is considered the Swedish metro. Stockholm Metro is called "the longest art gallery in the world". Such a romantic definition is due to the fact that since the 70s of the XX century, the walls of the metro during the construction ceased to align in order to save money. The stations are cut down in rock and, in addition to performing a transport function, are a huge art gallery. Sculptures, supergraphic walls and ceilings serve as decoration. The T-Centralen station is one of the most visited in Sweden. It is cut down in a rock, the arches are not finished, branches are depicted on them. The role of supergraphics in space design is amazing. At the Solna-Centrum station in Stockholm, it feels like you are inside a



cave with an arch formed by a frozen volcanic lava. All this is created artificially and makes a strong impression.

Not far from the University of Naples, the academic and multicultural component of this area of the city of Naples, the metro station, called "University" ("Università") was open. To develop the architectural concept of the metro station, a famous designer, architect Karim Rashid, was invited. Bright, applicative, dynamic, vibrant, multicolor, very different from everyone, the new metro station has become a phenomenon in the life of the city, and perhaps in world design. The technical surface of the wall cladding is made of DuPont™ Corian®. Live graphics in the style of "pop" on the floor and walls are complemented by decor from sculptures, installations and modern artwork both inside and outside. A multi-level station is a multi-color, bright and vibrant interior with functional spaces. The flowing forms and symbols of Karim Rashid, wall-mounted super-graphics create a dynamic space, reflect the strict spatial identity of the eminent author. The entire interior design of the station turns passengers to knowledge and encourages

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imagination and creative thinking. Picturesque or graphic works demonstrate both bright personality and originality of the author. Naples metro station is a vivid example. It is important that the author was entrusted not only with a wall panel in the recreation of the room, but with a completely general solution to the entire station. This is a fragment of a certain reality, considered in its entirety, gradually, forcing one to get into another world, out of touch with the entire usual perimeter of perception... This is an illusory world, born of the free will of the artist. Supergraphics will preserve the real spirit of the time at metro stations, present to the public the perception and interpretation of the present day by the authors. For passengers, the usual space of metro stations is a place from which you want to quickly get out and run on business. The aggressive visual environment of the metro space with the help of modern graphics turns into a place quite comfortable for a person.

The first metro stations were built as underground palaces [4,8,9]. The heyday of totalitarian architecture, the first Soviet years went big and with luxury. The old stations of the capital metro have mainly stucco, gilding and



richly decorated interior, which corresponds to a positive visual environment, modern stations have nothing of the kind. The problem is solved with the help of decorative surfaces, lighting effects, decor and elements of supergraphics.

The material used for modern metro supergraphics, including drawings made with concrete printing technology, is also used in the design of station halls with perforated panels with a pattern applied to them. The space of the metro, its aggressive environment with a huge flow of passengers requires non-standard materials. It is possible to use along the side walls - shock-resistant glass panels, as was used at the Spartak station of the Moscow Metro. Given the emotions of the fans, the design of the station was neutral, sports themes were used in the design of the station. Supergraphics of glass panels is quite consistent in color and composition, given its location in the direct line of sight of passengers.

CSKA station was opened in 2018. The station is located on the territory of the former Central Airfield. M.V. Frunze. The unusual supergraphics of the ceiling depicts various sports of the [Central Army Sports Club](#). The topic of football is diluted by paratroopers

921 descending from the sky, equestrian athletes and drifting sailboats. Images were applied to aluminum panels using computer color printing. CSKA station was designed in “army colors” - red and blue, emphasizing the corporate colors of the sports club.

Famous artist [Ivan Lubennikov](#) took part in the design of the northern entrance hall of the Mayakovskaya metro station. He performed sky-styled mosaics of the vault of the cash register hall. Mosaics on the ceiling can hardly be called simply mosaics, since they are united by a single yellow background, similar to a notebook quad sheet with the lines from poems by Vladimir Mayakovsky recorded. The result is a generalized supergraphic composition.

The geometry of the lines, the color expression of constructivism, the texture and volumetric vision in the two-dimensional ceiling space above the escalator of the Polezhaevskaya metro station of the Moscow Metro captivates the viewer. In addition, the dynamics of movement along the escalator either brings the object closer, or remotes it, constantly changing its appearance.

Constant contests for the design of new metro stations, where designers offer a modern bright interesting design,



help solve, including the problem of the aggressive visual environment of the metro. Examples of the interest of architects and designers in supergraphics in the Moscow Meropolitene can be seen in the examples of contests for the design of stations. For the first time, an architectural competition for the best design of metro stations in Moscow was held in 2014. Architects developed the design of the [Solntsevo](#) and [Novoperedelkino](#) stations of the Kalinin-Solntsevo line of the Moscow metro. The tradition has been continued.

The competition for the best architectural and artistic design of the “Nizhny Mnevniky” and “Terekhovo” Moscow metro stations showed the wide possibilities of applying supergraphics to these objects. The Terekhovo station project of the Moscow IND Architects studio is a combination of drawings with “naive graphics” on the walls with bright yellow spots of lamps and benches. In the project, the black and white futurism of the paintings on the walls is complemented by a series of modern sculptures inspired by the work of the French artist Xavier Vejn. In the Street Art project of Frontarchitecture Bureau of Architecture, it was proposed to introduce street graphics into design: the

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art of street art at the intersection of modernism and modern graffiti by local artists was to form the basis of supergraphics of the hall and other vertical surfaces.

Based on the foregoing, supergraphics changes our space. It makes it brighter, more interesting. It reflects the spirit of the times, striving to bring dynamism, speed, energy of the future into our lives, to make us think about the present, decorates our life, makes it aesthetically a little more attractive. Changes the space, ennobling and harmonizing it.

3. CONCLUSION

The attitude to street art is changing today, various platforms for the development of art are being formed. The change in the appearance of urban spaces is being implemented in a number of production and exhibition projects.

This article analyzes the specifics of supergraphics, its relationship with the concepts of graffiti and street art. Examples of new materials, innovative technologies for the implementation of supergraphics on the example of the metro are considered. The variety of artistic techniques of supergraphics and its influence on the



harmonization of the surrounding subject-spatial environment are revealed. We can conclude that supergraphics successfully solves the problem of video ecology of the urban environment. The practical significance of the work lies in the fact that the article will contribute to further developments in the methodological material on this topic, will help in the formulation of project tasks, and to evaluate the work on the supergraphics.

In many countries of the world, one of the main directions of state policy in relation to the city is the active refinement of its space. Supergraphics is being introduced into the city space playing it up interestingly and in a new way. The visual solution, “superimposed” on an independently existing three-dimensional object, introduces into the urban environment depleted of architectural elements the necessary video-ecological series that the modern resident of the megalopolis hardly lacks.

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