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Abstract

The features concerning formation of the modern environment of city centers around valuable baroque objects were considered in this article by the example of historic cities of Ternopil region, the heyday of which got closer to 17 - 18 centuries.

Keywords: valuable baroque complexes, architecture and town-planning heritage, historic town dominant, shape and planning composition.

Аннотация

На примере исторических городов Тернопольской области, период расцвета которых приходился на 17 - 18 вв., рассмотрено особенности формирования современной среды центров городов вокруг ценных барочных объектов.

Ключевые слова: ценные барочные комплексы, архитектурно-градостроительный наследие, доминанты исторических городов, объемно-распланировочная композиция.

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MATERIALITY OF ARCHITECTURAL FORM WITHIN THE CONTEXT OF CONTEMPORARY GEOPOLITICAL PROCESSES

Abstract. The paper gives coverage of the main aspects of interrelation of geopolitics and contemporary architecture, in particular the materiality of architectural form. Local and 'international' materials applied for conceptual design projects often reflect the position of the state at the geopolitical world map. There are considered the materiality of architecture through the prism of main geopolitical concepts in modern world.

Keywords: materiality, geopolitics, architectural form, globalization, postmodernism, neo-modernism.

Introduction. Geopolitics is determined as a study of the influence of geography, economics, and demography on the politics and especially the foreign policy of a state and a combination of political and geographic factors relating to something. [1]. Many researchers pay attention to the reciprocal action of politics and architecture. The geopolitical significance of the architecture can be discovered

through the material constituent of architectural form and discover its geopolitical value.

The aim and scope of the research. Although there is accumulated a lot of sources confirming the interrelation between architectural form and political phenomena, it is still a limited information about influence of geopolitical factors on material implementation of the architectural project. The aim of current research was the revealing little-studied aspects of interrelationship between architectural materiality and geopolitical process in modern world. The time scope of the research spread from the post-war period to nowadays; geographically the research reveals the basic aspects of such interrelations attributable to developed world.

Modern geopolitical picture of the world: State of art. According to modern geopolitical imagination over last decades there was a number of dramatical changes worldwide. The dissolution of Soviet Union resulted in multipolarity instead of dominated bipolarity. Globalization processes deepening European integration, decreasing centralization in different states of Asia, Africa and South America, extreme growth of China economy oriented on export of the raw and goods of low-cost, deindustrialization of the economics like in USA are distinctive features of permanently changing picture of the world. At the same time there are armed conflicts for territories. The “state based world <...> might seem to be in serious disarray” [2]. According to J.A. Agnew, “the world <...> live in postmodern times because of increased awareness of Eurocentric nature in this way of thinking” [3].

Among different geopolitical conceptions and doctrines, there are eliminated aggregative conceptions to fit the description of the main tendencies in architecture. In terms of Order of Great Spaces suggested by Carl Schmitt, there are applied Mackinder concept of a Sea, subjected to motion (dynamic, modernization, applying the latest developments, orientation on individual, commercial things). Whereas another conception of Land means rather traditional conservative static system with strong hierarchical links [4]. There is also suggested the concept of Grossraum (“great space”) suggested as global or regional arrangement, “respecting the national interest of one or another Great Power or alliance” and correlated to it, concept of the “Empire” [4]. The social and political value of architecture and its materiality can be discovered through the prism of these processes.

Politics, geopolitics and architecture. There are several opinions on interrelation between architecture and politics as well as geopolitics. In recent history of Modern architecture can be considered as total and therefore most geopolitical one. Thus, arguing the convictions political attitude of Modern Movement Marcel Breuer in 1935 stated: “<...> politics, of course, paly an immensely important part in architecture, but it is a mistake to identify that part with anyone of its different

functions<...>. The technical and economic potentiality of architecture is independent of the political views of its exponents” [5].

However, a large number of researchers argued for the influence of political and geopolitical processes on architecture. In articles, programs and manifestoes of modern architecture interrelation between social, political and architectural were and is of great importance [6, 7]. According to Allan Greenberg, “classical architecture is based on a language of form capable on communicating these ethical and political ideals” [8]. Roger Scruton considered that “...modernism <...> told us to be true <...> to social function, to materials, to political principles” [9]. Renzo Piano and Richard Rogers stated that “Ideology can not be divided from architecture. Change will come from radical changes in social and political structures” [10]. In his work “Towards a Radical Eclecticism” Charles Jencks stated that 1980 that in the contemporary consumer society among others reveal political problems as basic ones. Charles Jencks in his “13 Propositions of Post-Modern Architecture” summarizes: “Architecture must crystallize social reality and in the global city today, the Heteropolis, that very much means the pluralism of ethnic groups; hence participatory design and adhocism” [11].

Timothy Luke determined global geopolitics along with the nation-state and mass society is historical artefact “used for constructing and conquering the built environment or social spaces of second nature” [12].

Stefano Boeri talks about geopolitics of clichés - public images, that identify every country. The architectural images, the “physical and material space” create “powerful metaphors of a country’s social and cultural life” [13].

Peter Eisenman’s supposes that idea of new rise of critical architecture is connected with two main geopolitical processes: end of class struggle communism versus capitalism and positions of Pacific Rim and Muslim countries, not dependent on Western capital. Politics of location replaced politics of colonization [14]. In many researchers architecture is considered as an instrument for propagation political ideology to the society [15, 16].

The heritage of outstanding architects often demonstrates geopolitical motives. That is a very true for masters of Modernism age. In this way it could not but mention, work by Eeva-Lisa Pelkonen, devoted to Alvar Aalto, who wrote remarkable regional history of architectural modernism, full of geopolitics’ connotations to his activities [17].

However just few of the works suggests the way of geopolitical understanding of architecture. Alison Wolanski describes modern architectural theory as duality and confrontation of ‘flows and roots’ thus admits the oversimplification of such analysis because of the complex processes of internationalization and searching of national identity in modern global world. ‘Flows’ as a synonym of decentralization, dynamism

is more attributable to Western world, where ‘materiality and form have now more to do with global trends than with indigenous materials and skills’ [15]. ‘Roots’ as synonym of tradition, concerning about place, identity. It is more attributable to Muslim world. To our opinion ‘Flow’ can serve as equivalent of conception of the ‘Sea’ described earlier as well as ‘Root’ to the ‘Land’.

The current dialog between more universal language of Neo-Modern tendencies and versatile language of postmodern architecture can be considered in terms of flows and roots. However these dialog should not be oversimplified as if Neo-Modern style has its out roots in Modern architecture whereas it makes a dynamic flow over the world. At the same time postmodern conceptions, rather dynamic and synergetic, have their roots in historicism.

The materiality of architecture with geopolitical context. The most of considerations geopolitical constituent in architecture and architectural one in geopolitics deal with form and space as fundamental elements [16]. Thus there are few sources taking into consideration materiality of architecture. Adrian Forty in his book “Concrete and Culture” devotes the chapter to geopolitics of this international material [18]. He considers that reinforced concrete has ‘universal nature.’ Thus at the raise of Modern architecture, he identifies U.S. as the nation of steel, and Europe as a land of concrete, thus he thinks that it really ‘started to matter after <...> Second World War’ due to the influence of US on European affairs. Reinforced concrete application broadens as soon as prefabricated systems have been developed. In today world as A. Forty states, center of concrete gravity moved from ‘developed world’ to developing world’. He considers ‘national concretes’ as specific approaches to concrete architecture expression, which formed in Japan, Mexico, Brazil, USSR national styles. Geopolitically this material is the most international (‘beyond control of any one nation’ [18]) and most democratic one.

Through all the history of architecture materiality was closely connected to technical progress. The most vital demonstration of geopolitical vision of the countries can be seen in the pavilions of World Fairs. They make significant geopolitical influence, as technological advancements implemented in material form and their political positions of the states. That can be confirmed by the research of Oliver Elser [19]. Like this, increasing geopolitical confrontation between Germany and Soviet Union can be observed at The Exposition Internationale des Arts et Techniques dans la Vie Moderne in Paris on 1937 designed by ‘court’ architects of Hitler and Stalin. Located ‘face to face’, the USSR pavilion designed by Boris Iofan and faced with Samarkand marble and German pavilion by Albert Speer both demonstrated massiveness and power.

The materiality of governmental buildings and complexes, international organizations, cultural centers, museums to attend for local and foreign visitors,

officially and non-officially can serve as precious source of geopolitical views of the countries.

Stone as 'eternal' material since ancient time became the main demonstrator of architectural style and political power as well as for identification the region. Geopolitical concept of 'Empire' fits to the stone application. The New Chancellery by A. Speer with vast polished marble floors, Palazzo della Civiltà Italiana in Rome—rather outwardly restrained, completely coated with travertine Giovanni by Guerrini, Ernesto Bruno Lapadula and Mario Romano, built as a part of Esposizione Universale di Roma. A new Roman Empire style was implemented in materials traditional for ancient Rome. According to Irona Chipova and others for this reason after World War II stone had “negative ideological taint as <...> 'fascist' material [20, 21].

The best samples of decorative and structural stone from deposits from all over the state stone used to be accumulated and widely used for facing main administrative building, and public places of high attendance (like underground stations) as it was in USSR. For instance, decorative stones of 18 deposits of former USSR were used for facing interiors of State Kremlin Palace in Moscow [22]. The declared 'fraternity of people' in this multinational state was also implemented in spreading the stones through all the huge territory and applying in architectural projects of different republics. The expansion of socialist architectural forms of Stalinist style like Moscow “Seven Sisters” forwarded abroad and implemented in local natural stones like Palace of Culture and Science in Warsaw. Completed in 1955, a year of Warsaw Pact that fixes established geopolitical bipolarity; it was aimed to symbolize implementation of socialistic ideas and links with Soviet Union.

Today the stone become an 'ambassador' of the country of origin in all the world. The stone as 'eternal' massive material always was the best to fit total models. Revision of classical models in postmodern Neo-historicism architecture allowed to reopen the stone potential as “true” material with unique opportunities. Return to roots in material and form at the same time new interpretation of the historical forms and minimalistic formal means of Neo-modern conceptions in projects by Peter Zumtor such as Museum of Archbishop's diocese in Cologne. Bibliotheca Alexandrina designed by Snøhetta faced with gray Aswan granite with carves scripts demonstrates the deep roots Egyptian civilization. Stone remains the best material to feel Genius Loci and Zeitgeist.

In postwar architecture due to geopolitical processes new countries and administrative centers arose. The invitation of the demonstrate their integration and there are several examples when world recognized Masters of Modernism were invited to implement for governmental buildings. Legislative Assembly by Le Corbusier in Chandigarh built with high expression in reinforced concrete, National

Assembly of Bangladesh in Dhaka by Louis Kahn which demonstrates allusion with ancient fortification built of cast-tin place concrete and inlaid with white marble elements became the symbols of international style far beyond the places of their origin. Whereas Charles Correa critically revised internationalism applying traditional architectural elements of his motherland - terracotta and form which biggest assembly chamber Stupa in Sanchi in the project of Legislative Assembly of the State of Madhya in Pradesh in Northern India

The modern largest cities often become Heterpolicises or 'Great places' therefore the flows accumulate different cultural experience and traditions not attributable to primary roots. Thus, the 'regional' laminated wood and natural wood, along with 'international' concrete, coral, aluminium castings, glass panels, and stainless steel became the main substances for implementation the national spirit of Kanak people for The Jean-Marie Tjibaou Cultural Centre in Noumea, New Caledonia by Renzo Piano. The example of bringing new values in the city with strong and old architectural traditions is the Mosque and Islamic Cultural Center by Paolo Portoghesi in Rome. In this and similar centers throughout the Europe carved stone, ceramics, gazed bricks are widely applied attributable first of all to Islamic architecture.

The confrontation and cooperation between international and regional, attempts to keep the national identity in the variety of materials and forms is an integral attribute of architectural materiality nowadays. The reinforced concrete, glass and steel became primary materials of Modern architecture as well as Neo-modernism and strong means in the process globalization in the architecture. That lead to the appearance of conceptual projects, in particular, ambitious megastructures in rather young but fast developing states. The leader in the quantity and quality of iconic superstructures is United Arab Emirates. The challenging architecture of steel, aluminum, and high-strength concrete and glass, which considering to 'international materials' demonstrates the material potential of the state and at the same time representing the ambitions of the state at the world geopolitics. This reveals the 'flows' conception rather than keeping 'roots', traditional for Islamic architecture. There is an opinion that "the main interest of ruling government in newly independent states is to demonstrate visible power and progress to receive the recognition in the world" [16].

In growing democratic and decolonization processes there are observed claims for 'Empire' status. In these cases, as there are tends to return to neo-historical style with classical forms richly decorated interiors, in some cases wide applications of imitations [23, 24]. Architectural projects implemented in two decades of the Under Yuri Luzhkov's governing in Moscow were marked as "Luzkkov style". With wide imitative materials and forms use a s a distinctive feature. For instance, there is

widely applied gres imitating natural stone, titanium nitride for gold leaves etc. There was common imitation of high-tech buildings sometimes with ordinary glazing and steel elements (Business center “Zenith”) [23] or large-scale business complexes like Moscow-City not completed. ‘The Guardian’ described this phenomena as “bulldozing Moscow's architectural heritage and replacing it with mock-palaces”. It was a limited attempt to integrate into Western civilization through the own transformation of postmodern and neo-modern by return to neoclassical roots, including pre-Petrine period in Russian history. Egg house by S. Tkachenko was called a hyperironic quintessence of Russian version of postmodernism [23]. That is a symbolic that these phenomena are the fragments of the whole picture of the current political state. President of the former Soviet Union Mikhail Gorbachev said in 2011 regarding political system in Russia: "We have everything - a parliament, courts, a president, a prime minister, and so on. But it's more of an imitation." [25].

The global growing tendency to dematerialization of architecture in terms of saving and rational application of material resources is implemented in parametricism, as a ‘new global ‘great new style after modernism’ according to Patrik Schumacher [26].

Conclusions. Connotations of materials and architecture reveal geopolitical intentions and geopolitical position of a state in the world. The basic architectural objects, which are able to reveal geopolitical position of a state as well as world tendencies in dynamics are temporary structures of World Fairs’ pavilions and key conceptual administrative buildings and cultural objects throughout the world. There are available a series of works, which prove the strong interrelation between architecture and geopolitics, however just few reveal materiality influence.

Upon analysis the main modern geopolitical conceptions it was suggested that Order of Great Spaces developed by Carl Schmitt and based on two main concepts of Sea as dynamics and synergy, and Land as tradition and conservatism can be applied along with conception of Flows vs. Roots by Alison Wolanski in terms of geopolitical understanding of architecture and its materiality.

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Анотація

Стаття присвячена основним аспектам взаємозв'язку геополітичних явищ та сучасної архітектури, зокрема матеріальної складової архітектурної форми. Місцеві та «інтернаціональні» матеріали, використовувані для втілення ключових концептуальних проєктів часто є відображенням позиції держави на геополітичній мапі світу. Матеріальність розглядається насамперед в контексті головних геополітичних концепцій сучасності.

Ключові слова: матеріальність, геополітика, архітектурна форма, глобалізація, постмодернізм, неомодернізм.

Аннотация

Статья посвящена основным аспектам взаимосвязи геополитических явлений и современной архитектуры, в частности материальной составляющей архитектурной формы. Местные и «интернациональные» материалы, используемые при воплощении ключевых концептуальных проєктов, часто отображают положение государства на геополитической карте мира. Материальность рассматривается в первую очередь в контексте главных геополитических концепций современности.

Ключевые слова: материальность, геополитика, архитектурная форма, глобализация, постмодернизм, неомодернизм.

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**СОЦІОКУЛЬТУРНІ ТРАНСФОРМАЦІЇ ТА МОДЕРНІЗАЦІЯ ЯК
ДЕТЕРМІНАНТИ РОЗВИТКУ АРХІТЕКТУРИ МІЖВОЄННОЇ ВОЛИНИ**