

EVOLUTION OF POLYCHROMY IN LVIV ARCHITECTURE

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To the memory of my teacher Kost' Prysiazhnyi

On the basis of field and archive research, the author has determined the main types, materials and techniques of polychromy, as well as the peculiarities of polychromy use in the architectural trends of Lviv architecture from the fourteenth to the first third of the twentieth century. The author has worked out the methodology of analysis of the polychromy evolution in Lviv architecture, which is based on the definition of certain characteristics of polychromy (materials and techniques), the indication of quantity of certain characteristics according to their location (façade, interior), and tables and histograms, which demonstrate the polychromy evolution in architecture.

KEYWORDS: polychromy types, polychrome materials, polychrome techniques, colour palette, architectural trends in Lviv architecture, methodology of analysis of the polychromy evolution.

Polychromy in architecture can be classified into building, architectural and artistic. *Building polychromy* manifests itself through the use of building and finishing materials in façades and interiors of Lviv buildings. *Architectural polychromy* emphasizes the architectural structure of a façade or interior with the help of the use of the general architectural scheme. *Painting polychromy* is the use of artistic means of expression, such as paintings, stained glass etc.

A certain colour palette and the chosen polychromy methods identify architecture of all historical periods. The polychromy types (architectural, building and

painting), different techniques (fresco, majolica etc.) are important means of architectural expression of the façade or interior.

The city of Lviv represents the perfect model for the research of any phenomenon in the process of stylistic evolution. Outstanding architects, sculptors and painters of different schools and nations created the historical architecture of Lviv. Therefore, Lviv architecture from the fourteenth to the first third of the twentieth century represents the entire palette of architectural styles from Gothic to Functionalism.

Despite the wide range of problems of research, there is no comprehensive study on the peculiarities of polychromy in Lviv architecture. We can find some information about the polychromy of Lviv buildings of that time in the articles by Lviv historian Volodymyr Vuitsyk¹, based on archival research. In addition, the conservators of the above-mentioned institute Myroslava Maiorchuk and Kost Prysiazhnyi² analyzed the polychromy of Gothic and Renaissance architecture in Ukraine, including Lviv, Kolomyia and Uzshhorod, on the basis of field research. Elements of the polychrome design of architectural and artistic details of a certain object or period are considered in specialized literature on Lviv architecture³, namely, certain periods or styles⁴ and architects⁵. Some scholars examine certain artistic methods and techniques inherent in Lviv architecture. In particular, the author of this article analysed certain elements of the polychrome decoration of Lviv buildings, namely, brick

masonry⁶, plaster and stone textures⁷, majolica tiles⁸, wooden elements⁹, terrazzo floors¹⁰ etc. Many aspects of manufacturing and the compositional features of stained glass¹¹ and ceramic floor tiles¹² in Lviv buildings were

¹ Бевз Микола (ред.), „Вуйцик В. Вибрані праці. В. Вуйцик”, in: *Вісник Укрзахідпроектреставрація*, Число 14, Львів: Інститут «Укрзахідпроектреставрація», Місіонер, 2004, р. 82–94, 104–109.

² Присяжний Кость, „Поліхромія інтер'єру львівської кам'яниці. Досвід реставрації. Пам'яті Мирослави Майорчук”, in: *Тези та матеріали доповідей I Міжнародного форуму реставраторів*, Львів: Сполом, 2002, р. 16; Prysiażnyj Kost, „Do historii koloru w architekturze. On the materials of the research of the institute „Ukrzahidproiektrestawracja”, in: *Tezy konferencji „Kolor i faktura w architekturze”*, Wrocław: Wydział Architektury Politechniki Wrocławskiej, 1998.

³ Cielątkowska Romana, Oniśenko-Švec' Liliya, *Detal architektury mieszkaniowej Lwowa XIX i XX wieku*, Gdańsk: Wydział Architektury Politechniki Gdańskiej, 2006; Гранкін Павло, *Статті (1996–2007)*, Львів: Центр Європи, 2010.

⁴ Бірюльов Юрій, *Мистецтво львівської сецесії*, Львів: Центр Європи, 2005.

⁵ Бірюльов Юрій, *Захаревичі: Творці столичного Львова*, Львів: Центр Європи, 2010; Нога Олесь, *Іван Левинський: архітектор, підприємець, меценат*, Львів: Центр Європи, 2009.

⁶ Казанцева Тетяна, „Цегляне декорування фасадів львівських кам'яниць другої пол. XIX – поч. XX ст.”, in: *Вісник „Укрзахідпроектреставрація”*, Число 15, Львів: Інститут «Укрзахідпроектреставрація», Місіонер, 2005, р. 128–133.

⁷ Казанцева Тетяна, *Типи фактур в архітектурі Львова 1870-х – 1930-х рр. та принципи їх сучасного збереження: Автореферат дисертації кандидата архітектури: 18.00.01*, Львів: Національний Університет „Львівська політехніка”, 2004.

⁸ Казанцева Тетяна, „Майоліка на фасадах львівських будівель. Аналіз типології, стилістики і композиції на базі натурних досліджень”, in: *Проблеми дослідження, збереження і реставрації об'єктів культурної спадщини: збірник наукових праць кафедри реставрації та реконструкції архітектурних комплексів*, – Львів: Національний університет «Львівська політехніка», (Растр-7), 2014, р. 118–127.

⁹ Казанцева Тетяна, Гапаляк Катерина, „Дерев'яні елементи на фасадах львівських споруд кінця XIX – початку XX ст. Аналіз натурних досліджень”, in: *Вісник інституту „Укрзахідпроектреставрація”*, Число 18, Львів: Інститут «Укрзахідпроектреставрація», Центр Європи, 2008, р. 153–169.

¹⁰ Казанцева Тетяна, „Терацові підлоги у Львові: еволюція застосування, композиційний та стилістичний аналіз”, in: *Вісник Національного Університету „Львівська Політехніка”*. «Архітектура», № 836, 2015, р. 228–235.

¹¹ Гранкін Павло, *Статті (1996–2007)*, Львів: Центр Європи, 2010; Грималюк Ростислава, *Вітражі Львова XIX – початку XX ст.*, Львів: Афіша, 2004; Smirnov Jurii, *Lwowskie warsztaty witrażowe. Moda na pseudowitraże. Część I*, in: *Barwy Szkl. Nowosti*, [online], [cited 2016-07-20], <http://barwyszkl.pl/lwowskie-warsztaty-witrazowe-moda-na-pseudowitrazze-czesc-i/>.

¹² Гранкін Павло, *Статті (1996–2007)*, Львів: Центр Європи, 2010; Лисенко Ольга, „Архітектурна організація,

examined. Therefore, this article is a continuation of the series of the author's works concerning the evolution of polychromy in Lviv architecture¹³.

Polychromy is one of the most changeable characteristics of an object that depends on the style, the client's taste or the preferences of the owners. Besides, atmospheric factors and environment pollution have a negative influence.

STYLISTIC ANALYSIS OF THE POLYCHROMY EVOLUTION IN LVIV ARCHITECTURE

Because of numerous fires in the sixteenth century, we have little information about **Lviv Gothic** (fourteenth to fifteenth centuries). Geometric ornaments of

конструювання та оздоблення підлог вхідних приміщень у житлових будинках Львова кін. XIX – поч. XX ст.», in: *Вісник Львівського державного аграрного університету «Архітектура і сільськогосподарське будівництво»*, № 6, Львів, 2005, p. 191–198.

¹³ Казанцева Тетяна, „Поліхромія інтер'єру як складова архітектурної мови Августа Богохвальського (на базі львівської архітектури)», in: *Українсько-польські архітектурні візії: погляд крізь часи і епохи. Колективна монографія за матеріалами I Міжнародного симпозіуму*. Харків: Харківський національний університет міського господарства імені О. М. Бекетова, 2016, p. 11–22; Казанцева Тетяна, „Еволюція поліхромії в архітектурі Львова 1870-х – 1930-х рр», in: *Сучасні проблеми архітектури і містобудування*, Київ: Київський Національний Університет будівництва і архітектури, 2016, Вип. 42, p. 44–53; Kazantseva Tetiana, „Ewolucja polichromii w architekturze Lwowa w okresie od XIV wieku do pierwszej połowy XVII wieku», 24 (2), in: *Przestrzeń i Forma*, Szczecin: Instytut Architektury i Planowania Przestrzennego Zachodniopomorskiego Uniwersytetu Technologicznego, 2015, p. 39–50; Kazantseva Tetiana, „Ewolucja polichromii w architekturze Lwowa w drugiej połowie XIX wieku», in: *Przestrzeń i Forma*, 27, Szczecin: Instytut Architektury i Planowania Przestrzennego Zachodniopomorskiego Uniwersytetu Technologicznego, 2016, p. 227–244.



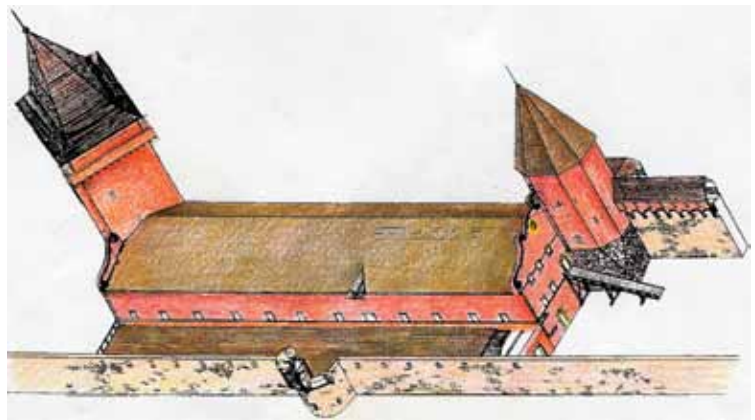
1. Versions of façade polychromy of the residential house at 28 Market Sq.: 1) in Renaissance, 2) in Baroque, 3) in the Soviet period (restoration works of the 1980s); 4) today (restoration works of 2016). Drawing by the author, 2016

Turgaus g. 28 gyvenamojo namo fasado polichromijos versijos 1) Renesanso laikotarpiu, 2) baroko laikotarpiu, 3) sovietiniu laikotarpiu; 4) šiandien

brick masonry with pink joints and colour-glazed or strongly baked bricks play the main role in the polychromy of Lviv gothic façades. For conservation and aesthetic purposes, stone masonry was plastered with lime mortar with red pigment. The coloured light was treated as a symbolical phenomenon, which evoked divine joy and purification. As archaeological finds show, muff glass and crown glass were the types used in the windows of Lviv gothic houses; stained glasses decorated church windows. The unique preserved paintings a la fresco from the late fourteenth to early fifteenth centuries in the interior of the Armenian Cathedral proved that it was a widespread practice.

2. Restoration of polychromy of the City Arsenal. Drawing by the author, 2016

Miesto arsenalo pastato polichromijos restauravimas



3. Polychromy of Renaissance Lviv – dominance of the red colour (Korniakt Tower). Drawing by the author, 2016

Lvovo renesansinė polichromija – raudonos spalvos dominavimas, Korniakto bokštas

Renaissance (from the sixteenth to the first half of the seventeenth centuries) was a period of the domination of architectural polychromy. The façades of Renaissance houses were built from brick with sandstone details and painted later. On the basis of research of the façades of Lviv city houses, we advance a hypothesis about the peculiarity of the polychromy of Lviv Renaissance façades, namely, the light ochre (ivory) colour of the façade and multicoloured (red, green, black, gold) painting of stone portals and window frames. The red painting at 28 Market Square was made in the Soviet period, though soundings show a different palette without red. The soundings of the authentic polychromy of the sandstone details (28 Market Square) opened unique orange paint on the mask, and turquoise paint on the mask's headdress, gold on the lions (the first polychromy period) and complete black paint (the second polychromy period) [fig. 1]. The façades of administrative and sacral buildings were regularly painted in red (City Arsenal, Armenian Lombard, Korniakt Tower [figs. 2, 3]. Unfortunately, the use of white lead caused the darkening of all stone details of Lviv façades, e.g., Boims Chapel or the ensemble of the Assumption Church. It was the cause of the creation of the Black House façade which was painted black afterwards and gained the name of Black House.

Renaissance interior polychromy can be divided into building and architectural. The first is alabaster inlay combined with the sandstone surface of window columns in the interior (Bandinelli Palace) or entire



4. Imitation of a natural stone surface in a Historicist façade (3 Sichovych Striltsiv St.). Drawing by the author, 2016

Natūralaus akmens paviršiaus imitacija istorizmo fasade, Sichovych Striltsiv g. 3

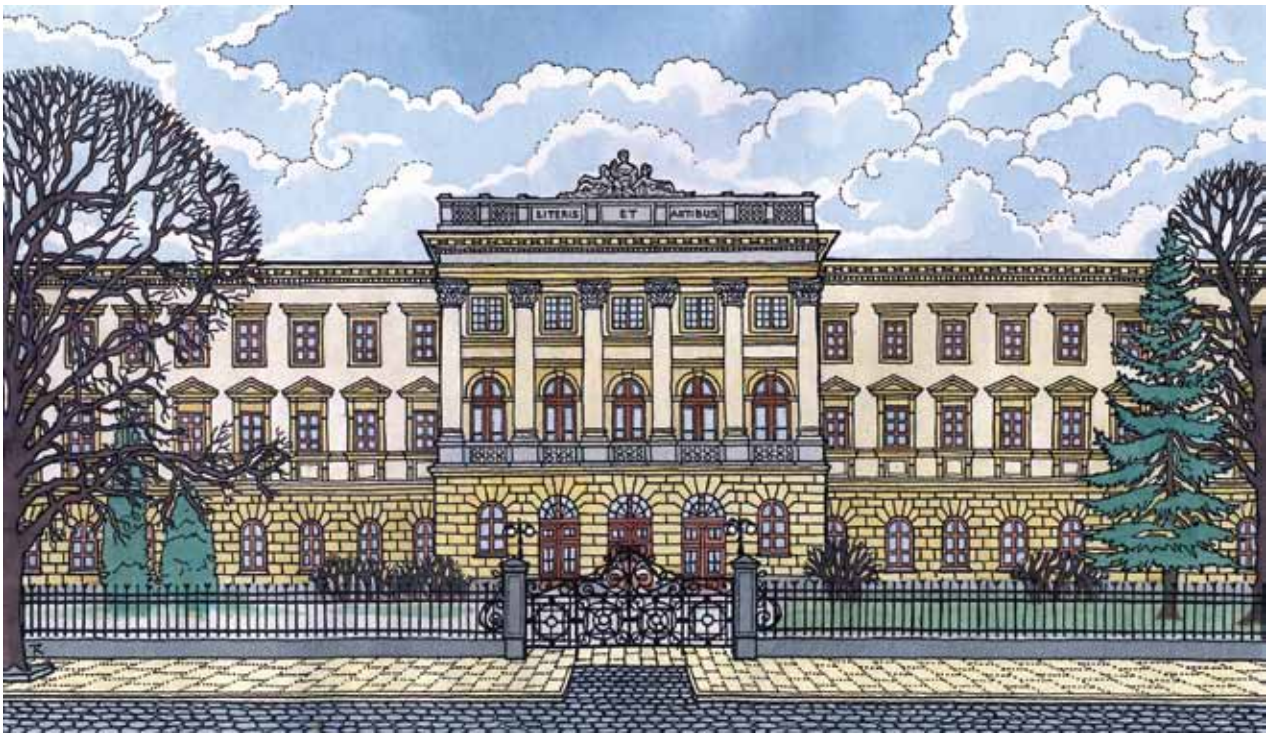
coating of the interior walls with inlay of marble, alabaster and sandstone (Kampians Chapel). According to field research, residential house interiors were painted in bright colours (black, red, blue, green, yellow, white and golden). Church interiors were also painted, and the first Trompe-l'œil (Grisaille) painting is found on the pillars of the City Arsenal. Wooden elements, such as interior doors and furniture, were covered with intarsia or its imitation.

In the period of **Baroque** (seventeenth to eighteenth centuries), two approaches to façade polychromy existed: 1) light architectural elements on a dark (often red) background (Royal Arsenal); 2) black architectural elements on a light or olive background (Jesuit Church). The essential feature of the period was the appearance of complex colour mixtures in combination with the golden colour. Murals decorated façade niches. Baroque interiors were characterized by the use of complex colour mixtures of finishing techniques (faux marble, scagliola, Trompe-l'œil (Grisaille), a la fresco) in combination with the golden colour of details (Jesuit Church), which produced an elegant colour palette. It was popular to create the illusion of an open ceiling revealing the sky with God and angels (Carmelite Church), or fantastic architectural landscapes with ships (Latin Cathedral). Golden architectural decoration dominates in the polychromy of

the lower level of the interior, while the vaults represent the sky with God and angels in Trompe-l'œil (Grisaille) technique (Bernardine Church). In Trompe-l'œil (Grisaille) technique, architectural elements (columns, statues, cantilevers, windows, balconies and moulding), as well as their shadows were imitated by painting means. In Lviv architecture of the Rococo period, pastel colours of the wall with white or golden details were widespread.

Classicism (the first half of the nineteenth century) was characterized by the hierarchic use of colours in certain places of the façade scheme – a yellow wall, white architectural details, black iron fences. In the Empire Style, relief elements were emphasized by the change of the background colour or the wall colour to red or black. The Empire style interior includes a variety of polychromy techniques and materials: parquetry, majolica tiles of the stoves, wallpapers, relief and Trompe-l'œil (Grisaille) on the ceiling etc. (6 Market Square (Royal Halls)). The background of the relief was coloured in green, lamps and picture frames were bronze, and the furniture was decorated with inlay and intarsia.

Historicism (the second half of the nineteenth century) changed the tradition of coloured façades and began to imitate (in coloured plaster) the colour of a natural stone surface (shadows of grey, ochre etc. colours) [fig. 4]. The system of shadow graduation in façades was



5. Complex system of shadow graduation in the Historicist façade of National Lviv Polytechnic University.
Drawing by the author, 2016

Sudėtinga šešėlinės gradacijos sistema Lvovo nacionalinio politechnikos universiteto istorizmo fasade

complex enough, but it has been lost nowadays, requiring specific field research [fig. 5]. Special artisans painted murals on the façades, which served mainly for advertisement purposes. G. Semper's discoveries of ancient polychromy opened the way for the revival of colour use in architecture, which started gradually from interior spaces where all possible polychrome techniques and materials were used. The interiors of public and sacral buildings in the New Baroque, New Empire, and New Renaissance styles demonstrated a large variety of luxurious polychromy techniques and materials: parquet, supraporte and plafond murals, marble and wooden panelling, graining, paintings, stained glass, coloured wallpapers, marble and bronze details etc. In Lviv rental and residential building interiors, certain polychromy techniques and materials were widespread, whose combination created the traditions of polychromy of the

period. Firstly, a very important method of interior design polychromy was painting, which means polychromy of architectural decoration and *al secco* plafond murals (only 30 examples have been preserved). Secondly, stained glass in courtyard windows (red, green, yellow and patterned stained glass of courtyard windows) causes transformation of the interior and exterior space. Thirdly, the entire interior space (staircase, wall panels, doors, balustrades, and parquet) was constructed from wood, which created a special palette of ochre shadows, additionally decorated with painting and graining. Fourthly, terrazzo floors (sometimes with mosaic inserts) were used simultaneously, which enriched the interior palette with noble colours of stone chips. Fifthly, in the Late Historicism period, ceramic floor tiles were widespread, whose evolution developed from monochrome and tricolour patterns to multicoloured



6. Complex system of shadow graduation in a Historicist façade (18 Vynnychenka St.). Drawing by the author, 2016

Sudėtinga šešėlinės gradacijos sistema istorizmo fasade, Vynnychenka g. 18

ones. Sixthly, ceramic floor tiles and the use of metal staircase fences (instead of wooden balustrades), bronze and brass details, and mirrors brought brightness and luminescence to the interior space of Late Historicism as opposed to the generally opaque and restricted palette of the period.

All the above mentioned polychromy techniques and materials were used simultaneously in Lviv historicist interiors obviously due to the lack of light in the interior space and to the willingness of the architect and the owner to use all historical methods in a nineteenth century building. Despite the intensive colour use, in historicist interiors architects in collaboration with artisans created a harmonious and comfortable space, which unfortunately has not been well preserved until our days.

In the **Picturesque style** (1890s), the main decoration of the façade was colour combinations of building and finishing materials such as brick and stone masonry, majolica elements, wooden and iron balconies and cantilevers, roof tiles, coloured plaster etc. [figs. 7–11]. Medieval, Eastern and vernacular architecture inspired that polychromy method. Sometimes murals made in the Renaissance or Medieval styles covered façades. The Medieval influence could be seen in colour combinations of interior design – open brick masonry, metal details, and crown glass. Stained glass as well as wall paintings



7. Use of coloured plaster in the façades of Late Historicism (Grand Hotel). Drawing by the author, 2016

Spalvoto tinko naudojimas vėlyvojo istorizmo fasaduose, „Grand“ viešbutis



8. Colour combinations of brick and stone masonry, majolica and wooden elements in Picturesque style (4 Kolberha St.). Drawing by the author, 2016

Tapybinio stiliaus plytų ir akmens mūro, majolikos ir medžio elementų spalvų kombinacijos, Kolberha g. 4



9. Brick façade with majolica inserts in Picturesque style (Dasheks villa, 41 Kotliarevskoho St.). Drawing by the author, 2016

Tapybinio stiliaus plytų fasadas su majolikos intarpais, Dašeko vila, Kotliarevskoho g. 41



10. *Opus mixtum* masonry and coloured roof tiles in Picturesque style (6 Pidvalna St.). Drawing by the author, 2016

Tapybinio stiliaus *opus mixtum* mūras ir spalvotos stogo plytelės, Pidvalna g. 6

became varicoloured at the end of the nineteenth century. Interior design combines all polychrome materials and techniques of all periods.

In **Secession** (1900–1910s), façade polychromy was diverse with the use of stone and brick masonry, coloured plaster, majolica panels, metal and wooden elements, roof tiles etc. [figs. 12–15]. Majolica panels can be relief or plane (widespread) with various polychrome combinations, floral or geometrical compositions, often with elements of the vernacular style. Mosaic panels were used as well. Interior decoration polychromy was exclusively rich, including fresco and secco paintings with Secession elements, or elements of the New Gothic or New Baroque styles. Mosaic panels were not used very often, though majolica tiles as well as marble and alabaster coated the walls and floors of vestibules and staircases. The variety of floor tiles was very interesting in its different colour combinations. Majolica stoves were important polychrome elements in the interior. Marble coating of walls can be used for a shining or polychrome effect. Terrazzo floors were used as well in



11. *Opus mixtum* masonry, majolica inserts and coloured roof tiles in Picturesque style (former Jewish Hospital, Rapoport St.). Drawing by the author, 2016

Tapybinio stiliaus *opus mixtum* mūras, majolikos intarpai ir spalvotos stogo plytelės, buvusi Žydų ligoninė, Rapoport g.



12. Complex colour façade palette, green windows, doors and roof of a Secession building (Sehal's rental house, Shevchenka Ave.). Drawing by the author, 2016

Secesijos pastato fasado sudėtinga spalvų paletė, žali langai, durys ir stogas, Sehalo namas, Ševčenkos pr.



13. Faux stone socle, majolica panels, complex colour palette of a Secession façade (5 Nyzshankivskoho St.). Drawing by the author, 2016

Secesinio fasado akmens imitacijos cokolis, majolikos paneliai, sudėtinga spalvų paletė, Nyzshankivskoho g. 5

14. Light wall colour, majolica panels, wooden brackets and roof of a Hutsulian Secession façade (101 Chuprynki St.). Drawing by the author, 2016

Huculų secesijos fasado šviesi sienų spalva, majolikos paneliai, medinės atramos ir stogas, Chuprynki g. 101



the late Secession period. The stained glass palette varied from monochrome to polychrome in various colour combinations according to the chosen theme. Stained glass decorated courtyards, vestibules and staircase windows creating a special polychrome atmosphere of the interior. Monochrome and polychrome stained glass imitations were used as well. Inlay and graining decorated marble doorframes and wooden doors. Brass and bronze rails, latches, and mailboxes enriched the polychromy palette of the interior. Mirrors were luminescent interior elements. All polychrome elements of the interior space were combined in a certain colour palette, often bronze and green. Some beautiful Secession interiors preserved until today demonstrate its various polychrome techniques and materials.

Art Deco (1920s) is characterized by laconic colour use; architects painted façades in light colours with rectangular polychrome inserts decorated with sgraffitos and paintings. Traditional black, red and grey colours were used in the geometric ornaments of sgraffitos also combined with inscriptions. Ornamental paintings were made on a golden or black background. Art Deco interiors were designed in a delicate colour palette with the use of facing materials. In the interiors of public buildings, the walls and columns were coated with dark marble, the ceiling was white plastered, and decorative

elements – capitals, lanterns, fences and furniture frames – were golden (brass or bronze). The stained glass and floor covering had a monochrome palette. After restoration, the interior of the Armenian Church and the Church of the Presentation was decorated with unique paintings by J. H. de Rosen with their cold bright colour palette and golden background.

In **Functionalism** (1930s), three attitudes to façade polychromy existed: 1) plastered façade (widespread practice); 2) entirely brick façade surface; 3) combination of plaster and brick surfaces. The combination of brick masonry and plaster façade surfaces is used to emphasize the ground floor and the house entrance with a colour accent. The practice of covering façades with colour plaster with mica and stone chips become widespread. It provided a high quality of the façade surface and delicate but diverse and varicoloured polychromy. Interior spaces were designed with the use of luxurious building materials – artificial marble for the walls and floor, monochromatic floor tiles and terrazzo, bronze lamps, brass for the rails, latches and mailboxes. Apartment doors were decorated in the graining technique imitating the wood texture. Sometimes the vestibule space was entirely covered with dark tiles, golden frieze, and majolica reliefs.



15. Light wall colour, majolica panels, wooden roof of a Hutsulian Secession façade (14 Lysenka St.).
Drawing by the author, 2016

Huculų secesijos fasado šviesi sienų spalva, majolikos paneliai, medinis stogas, Lysenka g. 14

METHODS OF RESEARCH OF POLYCHROMY
EVOLUTION IN ARCHITECTURE
(BASED ON LVIV)

Therefore, we can see that a certain colour palette and the chosen polychrome techniques characterized the architecture of each period and style. These characteristics determine what kind of polychromy (building, architectural or painting) dominates in a certain period.

On the basis of statistic study of the results of stylistic analysis, we compiled the tables of two main types: 1) the use of polychrome materials; 2) the use of polychrome techniques. In the first stage, the tables were made according to the polychromy use in façades and interiors. In the second stage, the characteristics of the polychromy use in façades and interiors were united, but the division into materials and techniques was retained. In the third stage, the use of polychrome materials and techniques was united in two tables according to their use in façades and interiors. In the fourth stage, a generalized table with all the assembled characteristics was created.

While compiling the tables, we have determined the set of characteristics in each case. Therefore, up to nine polychrome materials can be used in façades, up to 11 polychrome materials can be used in interiors, up to

seven polychrome techniques can be used in façades, and up to 13 polychrome techniques can be used in interiors. The general quantity of both polychrome materials and techniques simultaneously in façades and interiors is equal to 14. The general quantity of materials and techniques used in façades is 16, and 24 in interiors. In addition, the general quantity of all characteristics is 28. Obviously, to calculate the general characteristics we do not use the methods of mathematic addition but the analysis of the real use of a certain characteristic (according to Aristotle's thesis that "the total is more than the sum of its parts").

On the basis of each of nine tables, we have developed histograms, which demonstrate the evolution of a certain aspect of polychromy in Lviv architecture. To construct them, the x-axis is divided into intervals, which corresponds to the architectural styles from Gothic to Functionalism. Columns on the y-axis are created by the addition of certain polychrome characteristics taken from certain tables. Each of these characteristics is equal to one point, which gives the possibility of accurate estimation of the period. The created histograms clearly characterize the process of polychromy evolution, determining the periods of rise and decline and the culmination points. On the basis of the histograms, we can determine the periods, in which the

polychromy of materials dominates, and the periods of predominant polychromy of techniques.

While analysing the histogram of the evolution of techniques in interiors, we can notice two periods of culmination – Historicism and Rational Secession (11 out of 13 points), three periods of decline – Gothic, Classicism and Functionalism (3 points) and the periods of moderate use (6 points). Accordingly, so-called “monochromatics of Historicism” was not confirmed; on the contrary, one of the culminations is Historicism, at least in the use of polychrome techniques in interiors.

If the histogram of the evolution of polychrome techniques shows rather a gradual picture with periodical rises and declines, the histogram of the use of polychrome techniques in façades is quite a contrast. We revealed moderate polychromy use in Gothic (3 points), Renaissance, Baroque (4 points), the absence of polychromy in Classicism, a rapid rise in the Picturesque style (6 out of 7 points) in comparison with a minimum quantity of techniques in Historicism, Decorative and Hutsulian Secession (1 out of 7 points), and again a rapid rise in Rational Secession and Art Deco (5 out of 7 points) and a rapid decline in Functionalism (1 point). Obviously, the use of polychrome techniques in façades requires accurate correlation with the style concept, but in interior spaces they were one of the best means of decoration in any period. Summarizing the quantity of techniques used in façades and interiors, we can observe a picture of their gradual development with a rise in Renaissance (7 out of 14 points), the first culmination in Historicism (10 points) and the Picturesque style, the second culmination in Rational Secession (11 points), and a gradual decline. Before each culmination, we can observe a rapid decline, as in Classicism before Historicism, and in Hutsulian Secession before Rational Secession. Therefore, following that principle, we could forecast a rapid rise after the decline in Functionalism, but it was not realized because of social and political changes.

The histogram of the use of polychrome materials in façades demonstrates rather a different picture of evolution with culminations in Gothic, Picturesque and Rational Secession with an equal quantity of points (8 out

of 9 points), declines in Baroque and Classicism (3 points), Art Deco and Functionalism. The use of materials in interiors is rather stable because in each period at least seven materials were used with a slight rise in the Picturesque style (9 points). Obviously, it is explained by tradition and convenience of the use of these polychrome materials.

The aggregate histogram, which demonstrates the use of materials in façades and interiors, gives a stable picture of evolution with slight deviations from the average, namely, 8–9 materials in each period and two culminations in the Picturesque style (13 points) and Rational Secession (11 points).

Summing up the use of materials and techniques in interiors, we receive a histogram with the metric location of rises and declines, namely, with a slight rise in Renaissance (14 out of 24 points) and two culminations in Historicism and Rational Secession (18 out of 24 points). Accordingly, in the intervals we can observe the declines with minimums in Hutsulian Secession (9 out of 24 points) and Functionalism. This histogram demonstrates the general attitude to interior polychromy in a certain period.

Summing up the use of materials and techniques in façades, we obtain a more contrasting histogram with a gradual decline from Gothic (11 out of 16 points) to the minimum in Classicism (3 out of 16 points), a slight rise in Historicism (6 out of 16 points) and an absolute culmination in the Picturesque style (14 out of 16 points), again a rapid decline in Decorative Secession and a considerable rise in Rational Secession (13 out of 16 points), as well as a gradual decline to the minimum in Functionalism (4 out of 16 points).

In addition, in the final histogram, which combines all characteristics, we can see a full view of the role of polychromy in each period. We observe a gradual transition from Gothic (13 out of 28 points) to Renaissance (17 out of 28 points), a decline in Baroque (13 out of 28 points) and the minimum in Classicism (11 points), which change to a rapid rise in Historicism (18 points) and a culmination in the picturesque style (22 out of 28 points), a rapid decline in Decorative Secession (13 out

of 28 points) and Hutsulian Secession (12 points), the next culmination in Rational Secession (22 out of 28 points), and a decline in Art Deco (14 points). The results of statistic processing and appropriate histograms are presented below (tables 1–9, figures 1–9).

CONCLUSIONS

1. On the basis of field research, the author has revealed the peculiarities of the use of polychromy in architectural trends of Lviv architecture: in Gothic – ornaments of brick masonry, stained glass and interior paintings; in Renaissance – multicoloured architectural polychromy of façades and interiors (red, blue, green, ochre, white, gilding), cladding (alabaster, marble) and intarsia in interiors, in Baroque – the use of a complex polychrome palette, illusionistic paintings (*Trompe-l'œil*) or imitation of precious materials – marble and gilding; in Classicism – emphasis on white details on a yellow background, accentuation of a relief background with the red or green colour (in façades and interiors), parquetry use; in Historicism – grey façades with the use of multiple techniques in interiors (*Trompe-l'œil*, stained glass, terrazzo, ceramic floor tiles); in the Picturesque style – combination of brick masonry, stone, majolica, wooden and metal elements, paintings and mosaics in façades; colour materials, tiles, stained glass, wallpapers in interiors; in Decorative Secession – colour majolica panels on light façades; in interior – the richness of techniques (wall and ceiling paintings, stained glass, floor and wall majolica tiles, brass details); in Hutsulian Secession – majolica panels on light walls, shingle roofs with wooden brackets; in interiors – paintings in the Hutsulian style, majolica stoves; in Rational Secession – terrazzo plaster, stone cladding, mosaic and majolica panels, brass details in façades; theme paintings, stained glass, mosaics, gilding, faux marble, floor tiles, terrazzo in interiors; in Art Deco – light façades with paintings and sgraffitos, in interiors – faux marble, monochrome stained glasses, paintings, bronze and brass details, in Functionalism – terrazzo plaster or brick façades, in

interiors – faux marble, brass and bronze details, graining, terrazzo, monochrome floor tiles.

2. The author has developed the methodology of statistic and mathematic analysis of the polychromy evolution in Lviv architecture, which is based on the definition of certain characteristics of polychromy (materials and techniques), the indication of the quantity of certain characteristics according to their location (façade, interior or architecture in general), compiling nine types of tables and, accordingly, nine types of histograms, which demonstrate the polychromy evolution in architecture (from specific cases to general conclusions).

3. On the basis of created histograms, the author has determined the principles of the polychromy evolution. Therefore, the rises and declines in polychromy use in architecture have a sinuous development with two culminations (in the Picturesque and Late Secession styles) and two minimums (in Classicism and Functionalism). Analyzing the polychromy use in interiors, the author has found out that the first culmination moves to Historicism, and the general picture of development is rather stable. However, the histogram of the use of polychromy in façades demonstrates a significant amplitude that gave a possibility to determine periods with dominance of the polychromy of materials (Gothic, Picturesque, Secession) and the polychromy of techniques (Picturesque, Secession, Art Deco). This can explain the fact that in façades the use of polychromy is related to the requirements of architectural style, but in interiors polychromy is always the optimal means of architectural and artistic expression.

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Table 1

The use of polychrome materials in the façades of Lviv buildings

	Gothic	Renaissance	Baroque	Classicism	Historicism	Picturesque	Decorative Secession	Hutsulian Secession	Rational Secession	Art Deco	Functionalism
Wood shingle											
Roof tiles											
Wood											
Stone											
Wall majolica											
Metal elements											
Painted plaster											
Terrazzo plaster											
Brick											

	Gothic	Renaissance	Baroque	Classicism	Historicism	Picturesque	Decorative Se-cession	Hutsulian Secession	Rational Secession	Art Deco	Functionalism
Gothic											
Renaissance											
Baroque											
Classicism											
Historicism											
Picturesque											
Decorative Se-cession											
Hutsulian Secession											
Rational Secession											
Art Deco											
Functionalism											

Fig. 1. Histogram of the evolution of polychrome materials used in the façades of Lviv buildings

Table 2

The use of polychrome materials in the interiors of Lviv buildings

	Gothic	Renaissance	Baroque	Classicism	Historicism	Picturesque	Decorative Secession	Hutsulian Secession	Rational Secession	Art Deco	Functionalism
Alabaster											
Wood											
Stone											
Wall majolica											
Floor majolica											
Marble											
Metal elements											
Stucco											
Plaster											
Brick											
Faux marbling											

	Gothic	Renaissance	Baroque	Classicism	Historicism	Picturesque	Decorative Secession	Hutsulian Secession	Rational Secession	Art Deco	Functionalism
Gothic											
Renaissance											
Baroque											
Classicism											
Historicism											
Picturesque											
Decorative Secession											
Hutsulian Secession											
Rational Secession											
Art Deco											
Functionalism											

Fig. 2. Histogram representing the use of polychrome materials in the interiors of Lviv buildings

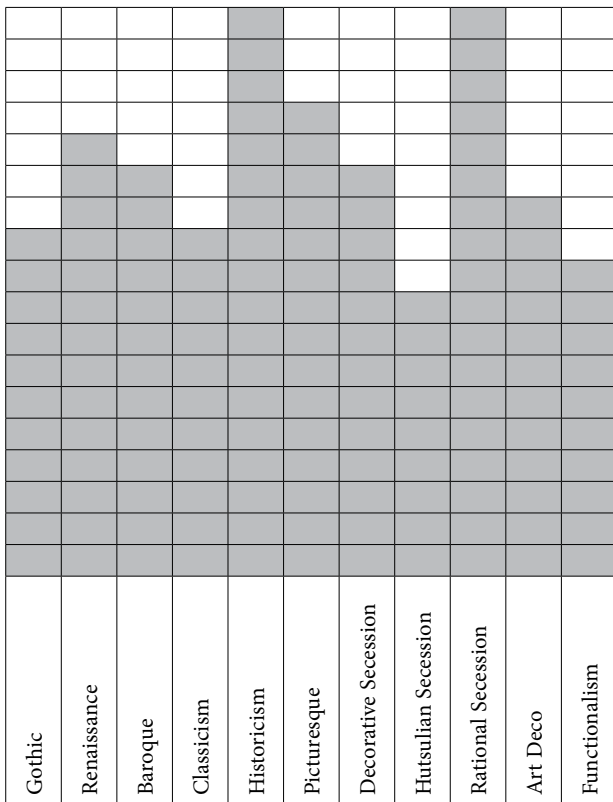


Fig. 8. Histogram representing the use of materials and techniques in the interiors of Lviv buildings

Table 9

Use of materials and techniques in the façades and interiors of Lviv buildings

	Gothic	Renaissance	Baroque	Classicism	Historicism	Picturesque	Decorative Secession	Hutsulian Secession	Rational Secession	Art Deco	Functionalism
Alabaster											
Wood shingle											
Roof tiles											
Wood											
Stone											
Wall majolica											
Floor majolica											
Marble											
Metal elements											
Stucco											
Painted plaster											
Terrazzo plaster											
Brick											
Faux marbling											
Opus alexandrinum											
Secco											
Fresco											
Stained glass											
Trompe-l'œil (Grisaille)											
Inlay											
Intarsia											
Wall mosaic											
Parquetry											
Gilding											
Sgraffito											
Terrazzo											
Graining											
Wallpaper											

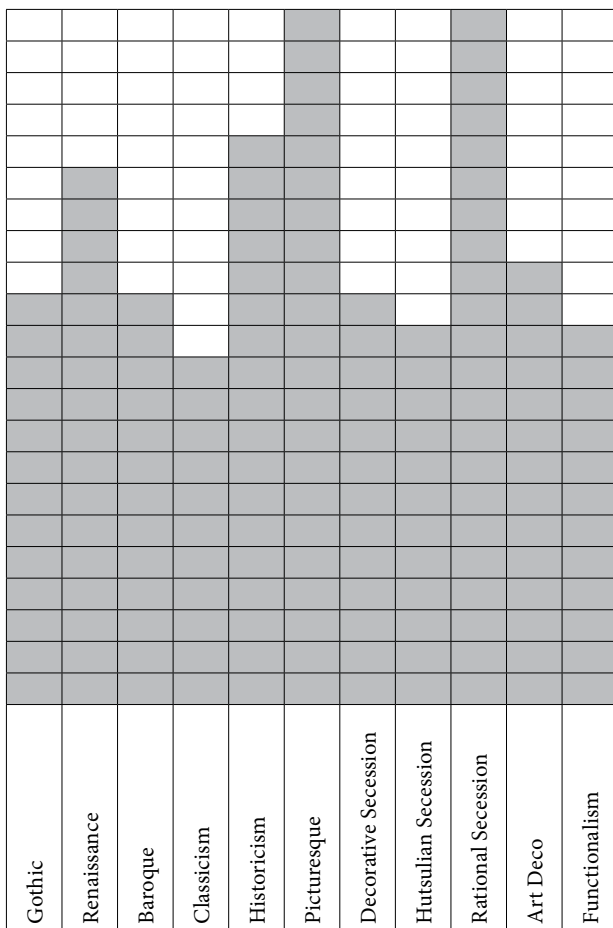


Fig. 9. Histogram representing the use of materials and techniques in the façades and interiors of Lviv buildings

POLICHROMIJOS RAIDA LVOVO ARCHITEKTŪROJE

Tetiana Kazantseva

REIKŠMINIAI ŽODŽIAI: polichromijos tipai, polichromijos medžiagos, polichromijos technikos, spalvų paletė, Lvovo architektūros kryptys, polichromijos raidos analizės metodologija.

SANTRAUKA

Remdamasi objektų ir archyviniais tyrimais, autorė išskyrė pagrindinius Lvovo architektūros krypčių polichromijos tipus, medžiagas ir technikas, taip pat polichromijos naudojimo ypatybes nuo XIV a. iki XX a. pirmo trečdaliao. Autorė sukūrė Lvovo architektūros polichromijos raidos analizės metodologiją, kuri yra pagrįsta tam tikrų polichromijos bruožų (medžiagų ir technologijų) apibrėžimu, tam tikrų bruožų kiekio įvardijimu pagal jų lokaciją (fasadas, interjeras) ir lentelėmis bei histogramomis, parodančiomis polichromijos raidą architektūroje.

Remdamasi objektų tyrimais, autorė atskleidė polichromijos naudojimo ypatybes skirtingose Lvovo architektūros kryptyse: gotikoje – plytų mūro ornamentai, vitražai ir interjero tapyba; Renesanso laikotarpiu – įvairiaspalvė architektūrinė fasadų ir interjerų polichromija (raudona, mėlyna, žalia, ochra, balta, auksavimas), interjero apdaila (alebstras, marmuras) ir intarsija, baroko epochoje – sudėtingos polichrominės paletės naudojimas, iliuzorinė tapyba (pranc. *Trompe-l'œil*) arba brangiųjų medžiagų – marmuro ir auksavimo – imitacija; klasicizmo epochoje – baltų detalių geltoname fone išryškinimas, fono reljefo pabrėžimas raudona arba žalia spalva (fasaduose ir interjeruose), parketo naudojimas; istorizmo laikotarpiu – pilki fasadai, įvairių technologijų naudojimas interjeruose (iliuzorinė tapyba, vitražai, *terrazzo* mozaikinės grindys, keraminės grindų plytelės); tapybiniame stiliuje – plytų mūro, akmens, majolikos, medžio ir metalo elementų kombinacija, tapyba ir mozaikos fasaduose;

spalvotos medžiagos, keraminės plytelės, vitražai ir tapetai interjeruose; dekoratyvinės secesijos stiliuje – spalvotos majolikos paneliai ant šviesių fasadų, interjeruose – technikų įvairovė (sienų ir lubų tapyba, vitražai, grindų ir sienų majolikos plytelės, žalvario detalės); huculų secesijos stiliuje – majolikos paneliai ant šviesių sienų, malksnų stogai su medinėmis atramomis; interjeruose – huculų stiliaus tapyba, majolikos krosnys; racionalios secesijos stiliuje – *terrazzo* tinkas, akmens apdaila, mozaikos ir majolikos paneliai, žalvario detalės fasaduose; teminė tapyba, vitražai, mozaikos, auksavimas, marmuro imitacija, grindų plytelės ir *terrazzo* interjeruose; *art deco* stiliuje – šviesūs fasadai su tapyba ir sgrafitu, interjeruose – marmuro imitacija, monochrominiai vitražai, tapyba, bronzos ir žalvario detalės; funkcionalizmo laikotarpiu – *terrazzo* tinkuoti arba plytų fasadai, interjeruose – marmuro imitacija, žalvario ir bronzos detalės, granuliavimas, *terrazzo*, monochrominės grindų plytelės.

Autorė išvystė polichromijos raidos Lvovo architektūroje statistinę ir matematinę metodologiją, pagrįstą tam tikrų polichromijos bruožų (medžiagų ir technologijų) apibrėžimu, tam tikrų ypatybių kiekio nuoroda

pagal jų lokaciją (fasadas, interjeras ar architektūra apskritai), sudarė devynis lentelių tipus ir, atitinkamai, devynis histogramų tipus, kurie atskleidžia polichromijos raidą architektūroje (nuo konkrečių atvejų iki bendrų išvadų).

Sudarytų histogramų pagrindu autorė nustatė polichromijos raidos principus. Taigi polichromijos naudojimas architektūroje turi vingiuotą vystymosi kreivę su dviem pakilimais (tapybiniame ir vėlyvosios secesijos stiliuje) ir dviem nuosmukiais (klasicizmo ir funkcionalizmo laikotarpiais). Analizuojant polichromijos naudojimą interjeruose, paaiškėjo, kad pirmasis pakilimas pasislinko į istorizmo laikotarpį, o bendras raidos vaizdas išliko gana pastovus. Vis dėlto polichromijos naudojimo fasaduose histograma rodo nemažą amplitudę, leidusią nustatyti laikotarpius, kuriais dominavo medžiagų polichromija (gotika, tapybinis laikotarpis, secesija) ir technikų polichromija (tapybinis laikotarpis, secesija, *art deco*). Tai gali paaiškinti, kodėl fasaduose polichromijos naudojimas yra susijęs su architektūrinio stiliaus reikalavimais, o interjeruose polichromija visuomet yra optimaliausia architektūrinės ir meninės išraiškos priemonė.