

EARTHEN DECORATION – VARIETY OF DECORATING ENTRANCE PORTALS OF EARTHEN BUILDINGS. RESEARCH REPORT.

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ABSTRACT: Earthen decorations on earthen buildings are found variously around the world and are characterized by visible differences according to the original site. In our paper we search for and discuss common aspects influencing the final form of the decorations. In particular, our main focus is on the African continent and the exterior design of the entrance portals of the buildings there, which has been supported by the available visual materials.

The entrance portals of residential buildings are interesting mainly due to the variety of their details. There are earthen decorations of various scales in both spatial relief and surface. The colour representations are another layer that is reflected in the final form of the decoration. Playing with the inherent and typical colouring of the natural material, as well as engaging sophisticated work with the admixture of coloured pigments and other organic or inorganic materials. Richly decorated colour realisations and, on the other hand, austere monochrome.

The article also summarizes the results of two years of research work on the topic of earthen decorations, which were developed within the specific research project "Hlína pro lidi" at the Faculty of Architecture of Brno University of Technology.

KEYWORDS: earthen decoration; earthen building; portal; relief; colour; painting; ornament; meaning of decoration

FOUNDATIONS

In Africa, there are many types of patterns and decorations appearing on structures made of earthen building material. These include relief structures, extensive colored paintings, and their combinations. The shape of the pattern is influenced by religion, cultural values, history, education level, location, and other possible factors.

The diversity of earthen decorations within the wide spectrum of influences in the African region led us to one common element, which we would like to focus on, and that is the decorated portal entrance (meaning windows and doors/entrance and window openings) of individual structures.

We would like to present our findings on the following realizations in the broader context of the entire continent. For better visual clarity, we chose the method of graphic schematization of characteristic motifs.

1. TOPIC SELECTION

The research report builds upon the partial activities of the specific research project "Earth for People. Ecological and economically friendly community constructions from earth." at the Faculty of Architecture, Brno University of Technology.¹ For the purposes of this research, we will use the abbreviation "HPL" to refer to this project.



Fig. 1.: State of the oven decoration just after completion in a wet state. (Source: Private archive of Ing. Zdeněk Vejpustek Ph.D.)

The narrower specification of this theme was preceded by a period of work on research related to earthen decorations last year. The information gathered during that time led to the creation of a private database and the subsequent practical outcome in the form of a completed decoration design for a faculty steppe oven of the Spanish type, along with the publication of an article. This oven was realized by students within the "HPL" project and the teaching of the "HLS - KE Earthen Architecture" course, supervised by an expert lecturer. (see Fig. 1.) In contrast, this year, we focused on finding common features and the potential for categorization, which we will specify in the text below.

As part of the research, we explored locations worldwide. For the purposes of this contribution, we focused our attention solely on the African continent because earthen construction has a preserved and still vibrant deep, cultural and symbolic tradition here, as confirmed by research using freely accessible photographs and sources. There are many variations, color combinations, and forms that deserve greater attention. This fact is likely linked to the availability of building earth, limited possibilities of using other building materials, and the delayed onset of globalization in society. In African architecture, earthen buildings are, therefore, a relatively common element.

The theme of earth in construction is, from our perspective, insufficiently explored in the Czech region. However, there is a progressive worldwide expansion of valid information about building with earth. Besides other institutions, systematic research has been ongoing at our faculty for a long time.² As a part of the broader faculty research "HPL," our team focuses exclusively on earthen decorations, specifically elements made from prevailing natural materials (or those occurring in nature) with potential hidden symbolism and significance.

Further specification of the theme focused on earthen entrance portals, since they are excellent examples of functional decoration in architecture for us. Similar to how a window is an entrance to the soul of a house, the ornamentation of the portal and its immediate surroundings can be a path to the soul of the owner or artist. The motifs used, serve not only an aesthetic

¹ Information taken from the source [12]

² The main personalities involved in earthen construction at the Faculty of Architecture of the Brno University of Technology: doc. Ing. Ivana Žabičková CSc., Ing. Ing. Kateřina Šmardová Ph.D., Ing. Eva Neumayerová, Ph.D., and the project leader of the "HPL" project responsible for this research report: Ing. Zdeněk Vejpustek Ph.D.

role, but also function as carriers of a certain type of information. Individual decorations can vary significantly and, for example, function as a visually important point in relation to the urban space.

2. IMPORTANCE OF DECORATION IN ARCHITECTURE

Right from the start, we can pose a simple question: decoration, yes or no? And what about the relationship between decoration and architecture as such? Is there any connection or their intrinsic importance? There were many discussions and passionate debates about this phenomenon in the past.

Let's start with a well-known statement by architect Adolf Loos: "Ornament is a crime."³ We could consider any decoration as a crime, based on this statement. Additionally, we can add the opinion of architect and urbanist Otto Wagner emphasizing the idea: "the sole starting point for our artistic creation can only be modern life" and also "what is not practical cannot be beautiful either."⁴ With these statements, trust in decorations is not very likely to be gained. Debates about the usefulness from a pragmatic perspective are entirely appropriate, but we all know how it was for these experts in reality. Renowned architect and urbanist Le Corbusier directed his thoughts towards the idea that "architecture begins only where questions of use are resolved" and demands a clear purposive solution with practical and aesthetic functions.⁵ Here, we already find slight commonalities that could lean towards positive reasons for the yes in decorating.

Moreover, if we add insights from contemporary practice, minimalist and simple design allows for faster construction processes, easier maintenance, and places greater emphasis on the function of the object itself. In the modern era, the speed of creation and efficiency emphasis, are reasons for the deviation from decorative elements, where this possibility has quietly disappeared from the perspective of artists as well as customers.

Not to mention only a negative view in this area, positive opinions on why to implement decoration in architecture are brought forth for instance by Dr. Kočí in an interview for Archspace: *"Art has always been part of architecture and always will be, by principle. [...] Even when cave people impressed their hands on the walls of their dwellings and temples, they painted their imprint in the world they somehow understood and through artistic techniques of drawing and painting (with charcoal, earth, blood...) wanted to evolve this understanding."*⁶

If we look for a connection between decorations and architecture, decorations can contain hidden meanings. We can include identification and informational elements, such as the marking of entrances and portals.

From an artistic perspective, decoration plays a crucial role in creating the overall impression of an environment or object and complements it aesthetically. Architectural decorations add unique character, style, and context to the object. The context can derive from historical context, traditions, culture, or the local population, depicting the symbolism of its story.

With this article, we would like to stimulate a discussion about decorations and decorativeness in contemporary architecture. It is possible that now is the right time for a revision of perspectives. It is also a question of how we can precisely distinguish the boundary when a building can be said to be decorated or not? Furthermore, with new trends returning to original, traditional and ecologically sustainable values, there is also a return to earthen buildings typically associated

with decorations.

2.1. DEFINITION OF THE TERM DECORATION

This contribution does not aim for a general and fully generalizable definition of the term, but is only concerned with decorations on objects in correlation with natural construction, especially on buildings made predominantly of earth and its derivatives.

For our research, we considered decorations as any elements exhibiting aspects of conscious transformation of the visual surface in the immediate vicinity of entrance portals and adjacent front facades (or entrance gate objects) of earthen buildings for purposes other than structural ones, where an aesthetic overflow is clearly evident.

From the perspective of earthen decorations, our main concern was to ensure that the building or decor element met significant criteria defined by us—construction from earth or the prevailing material of decoration have an earthen character.

2.2. THE POWER OF EARTHEN DECORATIONS

Natural materials, by adhering to simple techniques and working procedures, offer the potential for individual creative expression for anyone with minimal input of expended forces, their achieved education or craft skills, and without the need for special equipment. Economic efficiency and good availability, freedom, and uniqueness are essential.

Earth, as a basic natural material, has excellent formability from its elemental nature, encouraging simple and intuitive handling. The creative process itself offers a narrow physical contact, a material pleasant to the touch with an experimental nature. Regarding a similar relationship, though referring to decorations in general, Dr. Kočí also says: *"Human beings crave ornament (decoration), not just because it is beautiful, but because they imprint in it, reflect cognitive experience from the surrounding world."*⁷

To avoid only speaking about the positives of this medium, the significant exclamation point and unavoidable fact is, of course, the effect of water and the associated durability, i.e., subsequent degradation. But this is one of the fundamental properties of earthen material, with which one can work. With proper design and execution, earthen material, of course, fulfills all the requirements placed on a specific building or its part.

3. DECORATION ON THE SURFACE

From the perspective of the classification of earthen decorations based on their appearance, plane decoration is the first category since the plane, as a pure painter's canvas, is a basic element for creating colored decorations. This involves the simplest form of ornamentation—pure painting on the earthen surface around entrance openings. Depending on the color spectrum used, the category can be further divided into simple coloring, where only one color is applied. The following chapter refers to the use of multiple colors in the plane—multicolored realizations of entrance portals.

3.1. SIMPLE COLORING

The first example of simple decoration around the entrance is from Burkina Faso in Africa⁸, where exterior painting smoothly transitions into the decoration of the entire front facade. (see Fig. 2.) The color base is formed by the natural shade of earthen material, contrastingly underscored by a dark line/surface of the depicted patterns. Monochromatic geometric decora-

³ Haas, 1980, p. 164. - translated from a Czech language source

⁴ Haas, 1980, p. 89. - translated from a Czech language source

⁵ Haas, 1980, p. 334. - translated from a Czech language source

⁶ Gerich - translated from a Czech language source

⁷ Gerich - translated from a Czech language source

⁸ Factographic and geographical information from the source [14]

tion alternates with triangular patterns, which further graduate into a stylized depiction of human and animal figures. For a European-minded person, the resulting representation lacks deeper rationalization and evokes an incidental arrangement.



Fig. 2.: Illustrative scheme of a key part of the earthen facade in Burkina Faso. (Source: Author's illustration created based on freely available materials from: https://www.designboom.com/architecture/vitra-design-museum-learning-from-the-vernacular/?utm_campaign=Saturday&utm_medium=e-mail&utm_source=subscribers)

In contrast, an object located in Ekibondo village in the northern region of the Democratic Republic of Congo⁹ is relatively precisely anchored, concerning the painted images, in purely geometric patterns emanating from radially advancing centers. (see Fig. 3.) Patterns run around the entire surface of the facade and are horizontally terminated by the perforation of the entrance space. The essential here is again the contrast between dark and light areas.



Fig. 3.: Illustrative scheme of a detail of a contrasting pattern at the portal from Congo. (Source: Author's illustration created based on freely available materials from: https://africa.si.edu/exhibits/focus/images/12.2-Central_Africa115a.jpg)

3.2. MULTICOLORED REALIZATIONS

The category of multicolored realizations encompasses various color combinations applied to the surface. We were intrigued by the realization of a portal richly adorned with geometric patterns in South Africa. Specifically in the eastern part, where the village of Ndbele is located.¹⁰ (see Fig. 4.) Patterns on a uniform white background are bordered by a prominent black line and filled with vivid colors. The diversity of colors ranges from shades of vibrant blue through green, red to delicate pink or, for example, purple.

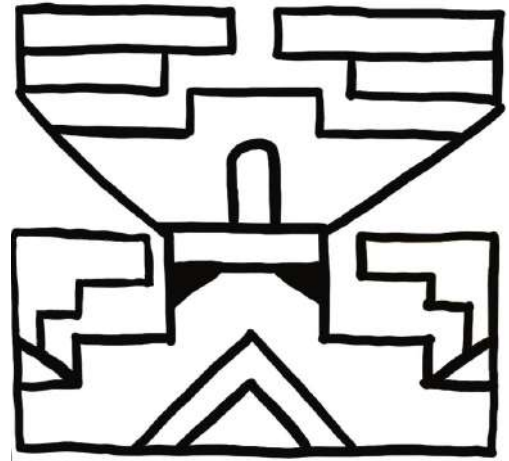


Fig. 4.: Illustrative scheme of a part of the decor in South Africa. (Source: Author's illustration created based on freely available materials from: <https://elephant.art/wp-content/uploads/2020/11/BPOK3W.jpg>)

Clear color shades are also present in paintings in the Niamey location in Nigeria.¹¹ The open entrance to the building is shaped into a pointed arch, formed by a planar framing, outlined in natural shade of earth. A simply framed entrance is complemented by the gradual layering of colored stripes with patterns, alternating in horizontal lines. Exact alternation of 4 colors – yellow, blue, red, and green, with white accents in the rhombus form. (see Fig. 5.)

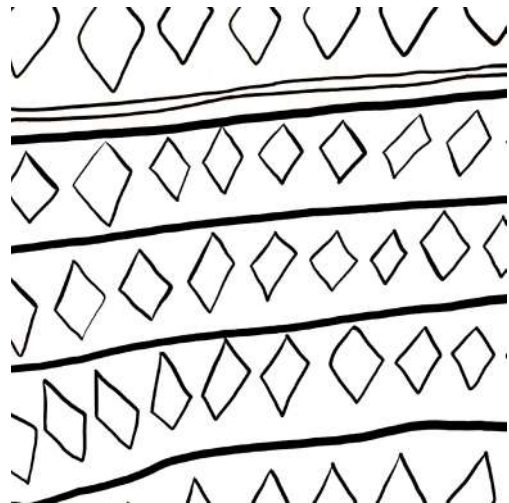


Fig. 5.: Illustrative scheme of a pattern on a portal in Nigeria. (Source: Author's illustration created based on freely available materials from: https://courier.unesco.org/sites/default/files/styles/paragraph_medium_desktop/article/courier/photos/cou_04_19_idea_amin_eng_internet_site.webp?itok=rotem6f6)

A certain simplicity and moderation in the process of working with decoration is exemplified by the entrance from Dongola in Sudan¹². (see Fig. 6.) In a contrast to the aforementioned realizations, here appears a motif of eight circles of four represented shades, on

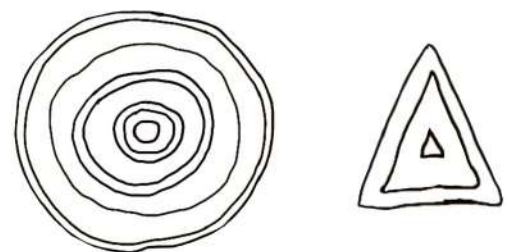


Fig. 6.: Illustrative scheme of motifs used to decorate the portal of Dongola in Sudan. (Source: Author's illustration created based on freely available materials from: https://upload.wikimedia.org/wikipedia/commons/thumb/5/51/Dongola_trad.jpg/1600px-Dongola_trad.jpg?20090128075623)

⁹ Factographic and geographical information from the source [10]

¹⁰ Factographic and geographical information from the source [8]

¹¹ Factographic and geographical information from the source [2]

¹² Factographic and geographical information from the source [3]

a white background. These shapes are located in the vertical direction of the decoration, along the raised mass of the entrance edge reminiscent of a pilaster. In the horizontal level of the missing lintel, the overall composition is complemented by three color-layered triangles.

4. DECORATION IN SPACE

The second category, where the earthen portal decorations gain volume and progress into other spatial dimensions, we labeled as decoration in space. It includes all spatial elements, relief structures, and 3D objects that are part of the decoration and emerge from the earthen surface of the walls.

Various types of relief can either be scratched out, by removing the material of the earthen walls to create the desired shape, in this case, we mostly refer to the sgraffito technique. Although we are still remaining in Africa, which may seem distant to our own environment, there are references from our geographical latitudes, too. In the Czech Republic, sgraffito is relatively often used as decoration for earthen plaster in the last decade. Materials for creating sgraffito in earthen plaster have long been developed, supplied, and technologically supported by, for example, the Moravian company Picas of the Navrátil's family.¹³

Another possibility is raised reliefs, where material is added. Working with this type of relief creation is similar to sculpting with ceramic earth with the exception of the final firing phase. In terms of comparison with the previous techniques, we believe that this type allows for the greatest possibility of gradation in artistic expression. Relief structures appear either in simple colors or again with the representation of a larger color spectrum.

4.1. SIMPLE COLORING

An example from the southern region of Ghana represents traditional Asante architecture¹⁴. (see Fig. 7.) The almost square entrance is framed by an allegory of the European understanding of an architectural frieze, in the inner field with plastic curves played out organically. Significant is the absence of a symmetrical appearance of the decor on all sides of the entrance. The contrast of the precise line of a brown-colored transition to the dark shade of the plinth complements the white surface with the representation of natural motifs.

In a same manner is also processed the decoration in western Africa. This time in the town of Ségou in the

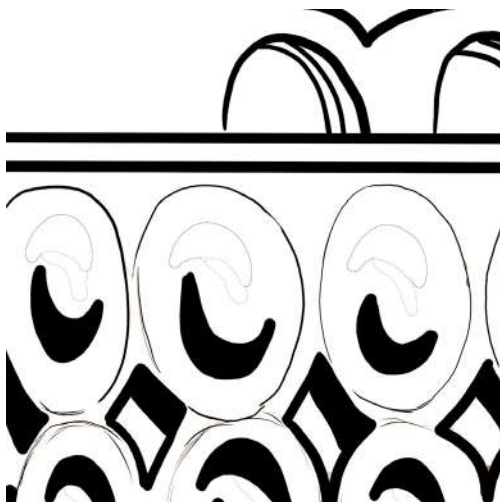


Fig. 7.: Schematic representation of the relief of traditional Asante architecture. (Source: Author's illustration created based on freely available materials from: https://www.getty.edu/conservation/publications_resources/pdf_publications/pdf/decorated_surfaces_vl.pdf, p. 141, Figure 7)

state of Mali¹⁵. (see Fig. 8.) A distinctly orange, monumental site of the entrance, framed by a massive spatial relief of a pointed arch, is solved by six prisms in different lengths, ending with a regular pyramidal spike. Interspaces are complemented by decorative perforation of circles touching vertical elements. In the places of the imaginary tympanum, only two rounded protruding objects are represented on an otherwise smooth surface.



Fig. 8.: Illustrative scheme of a part of the motif of a monumental scene in Mali. (Source: Author's illustration created based on freely available materials from: <https://www.flickr.com/photos/27784269@N06/5778572276/>)

As mentioned earlier about the sgraffito, it is an ideal time to delve into this phenomenon with an interesting realization from the village of Hausa Tubali in Nigeria¹⁶. (see Fig. 9.) Above the entrance of this example are three dominant patterns with the theme of flower calyxes extruded above the wrinkled exterior of the building wall. The protruding surface of the relief has a yellow-green or blue-white color and, compared to the natural color of the scratched facade, attracts all attention to itself.

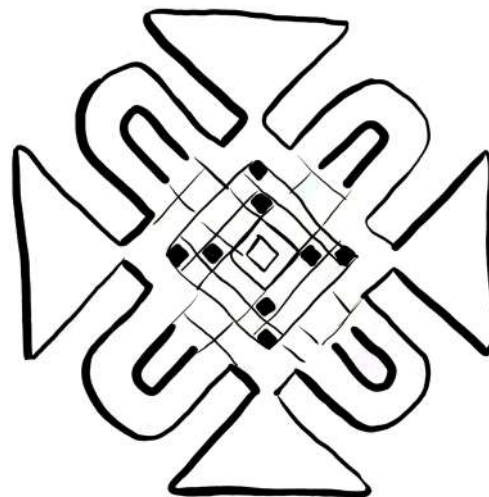


Fig. 9: Illustrative representation of a motif on the scratched facade of Hausa Tubali. (Source: Author's illustration created based on freely available materials from: https://www.nairaland.com/attachments/2212862_db05b6abab4149bc96826ed693e29dc0_ipega12698f030fe2028cd2958043199ad8b)

4.2. MULTICOLORED REALIZATIONS

The village of Ouadane in Mauritania¹⁷, listed on the UNESCO World Heritage List, is unique for its beautiful decorations on local houses. (see Fig. 10.) This is well illustrated by the pattern of the entrance portal framed by borders decorated with reliefs and surface painting. Wooden doors are emphasized by traditional ornaments, placed on the side along the opening and interestingly complement everything. Overall, rich

13 A family company engaged in the creation and development of earthen plasters in Moravia: <https://www.picas.cz/sgraffito/>

14 Factographic and geographical information from the source [13]

15 Factographic and geographical information from the source [9]

16 Factographic and geographical information from the source [7]

17 Factographic and geographical information from the source [4]

warm shades are used here, contrasting with the light surface. For interest, a uniform layer of red is complemented by the representation of a circularly conceived colored target.



Fig. 10.: Illustrative scheme of a decorated target on a house in Mauritania (Source: Author's illustration created based on freely available materials from: https://whc.unesco.org/uploads/thumbs/site_0750_0007-500-20151105122721.jpg)

In contrast to the warm carmine red of the previous Mauritanian example stands an object with cool Nigerian shades. The white-blue wall of the Boubou Hama National Museum in Niger¹⁸ is also an example from this category. Diverse lines transitioning into curves are tuned to light blue and protrude from the brightly white background. In dialogue with the simply framed entrance, continuing to the colored wall, is the door panel, also tuned to the same pigments. (see Fig. 11.)

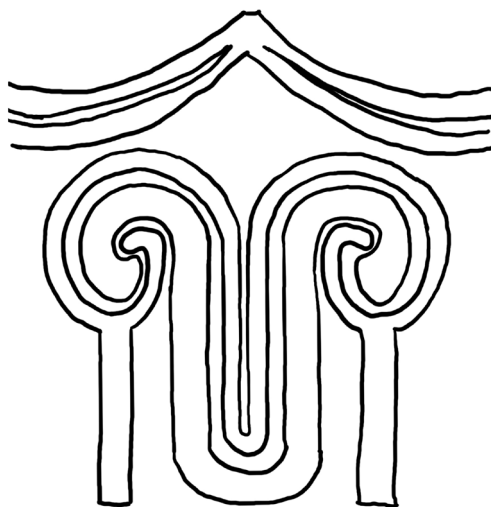


Fig. 11.: Schematization of a protruding relief on the facade in Niger. (Source: Author's illustration created based on freely available materials from: <https://www.messynessychic.com/wp-content/uploads/2020/06/d164nx0vhpj41-930x831.jpg>)

5. OTHER COMBINATIONS

The above-mentioned division into individual groups did not allow us to include intersections of both variants. Although it is not a fully strict division, we needed an additional class. Other combinations of earthen decorations are a category where creators partially take knowledge and techniques from the surface or space, leading to free mutual interweaving and far-reaching overlaps.

This category is exemplified by the village of Tiebele in the state of Burkina Faso¹⁹. (see Fig. 12.) Both flat monochromatic paintings and colored combinations of protruding reliefs appear here. A characteristic mo-

tif is a geometrizing illustration on the surface complemented by spatial representation of cylindrical structures orbiting in one or more layers around the edge of the portal. It is not a single shape of the wall, the surroundings of the openings are additionally enlivened by reliefs representing the animal kingdom. We can talk about connecting two worlds of technological procedures.

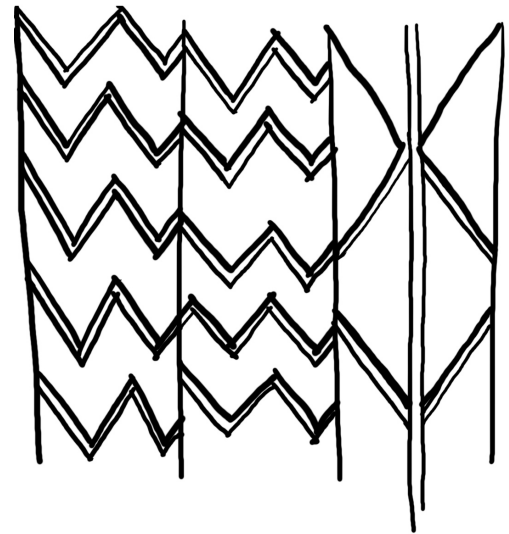


Fig. 12.: Illustrative scheme of a part of the pattern of an earthen wall in Tiebele. (Source: Author's illustration created based on freely available materials from: <https://i0.wp.com/www.tpoty.com/wp-content/uploads/2018/08/TPOTY2011WinnerLouisMontrose1.jpg?fit=1000%2C667&ssl=1>)

CONCLUSION

The article summarizes current findings in the research of earthen decorations covered by the specific research project "HPL" of the Faculty of Architecture at Brno University of Technology²⁰.

The research report defines the concept of earthen decorations as considered within the research project and adds a basic description based on the relationship to architecture, its own function, and its potential. Decoration in architecture is an element that is sometimes overlooked but can fulfill its important function in reality. Decorated entrance portals are a unique example where, at first glance, a seemingly supplementary substance, in addition to its aesthetic element, also performs an informational and identification function. To some extent, in connection with the mass of objects, they visually separate individual zones and arrangements, thereby contributing to better human orientation in space.

We are still talking mainly from our perspective about an artistic branch that in the vast majority of cases is not subject to any exact rules. Therefore, our above-defined division of the decorativeness of entrance portals is mainly indicative and should primarily serve an educational function. One of the main goals of the research is also to enable the general public to better navigate the issues and possibilities of earthen decorations.

We have divided earthen decorations into three main groups with their own subgroups, dividing plane decoration into simple coloring and multicolored realizations. We include examples with pure painting on the earth surface, where simple coloring is only used for symbolic outlines and multicolored realizations include colored paintings in the plane. The second subgroup includes decorations in space, which works with the same division scheme as plane decorations, and for a more precise description, these comprise simple coloring and multicolored realizations. The last men-

¹⁸ Factographic and geographical information from the source [1]

¹⁹ Factographic and geographical information from the source [11]

²⁰ Information taken from the source [12]

tioned category consists of other combinations including those examples where it is not possible to clearly define an inclination to one or the other group.

The main goal of the article is to contribute to the expansion of knowledge and the provision of information related to decorations in earthen construction and generally contribute to the development of building with earth. We would like to inspire others to discuss the topic of ornament in architecture and ideally to further continue and develop knowledge in this field.

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