

# Preserving Ukraine's Cultural Heritage through the Power of Visual Arts and Contemporary Design

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**Abstract:** The article is devoted to the study of the role of visual representation of culture and design for the preservation of the heritage of Ukrainian culture. During the war in Ukraine, many cultural monuments were destroyed, so such a study is highly relevant. After all, the preservation of cultural heritage is essential. Also, design and virtual representation are developing very much, which requires new approaches to preserving cultural heritage. Information technologies are now more widely used and need new approaches. The aim of the research was to study the design and visual reproduction of cultural heritage in its preservation. The object of the research was the cultural heritage of Ukraine. The study employs description, analysis, synthesis, comparison, generalisation, systematisation, and visualisation. The paper explores the current development of design and visual practices, their essence, and key trends. It identifies the influence of visual practices and design on contemporary Ukrainian culture and shows that they reflect the national mentality. The consequences of the full-scale invasion for the preservation of cultural monuments are outlined. Challenges related to limited funding and wartime destruction are also discussed. Examples of using visual practices and design for cultural preservation are analysed. The case of the holographic model of Yaroslav the Wise and the virtual tour of the Museum of Ukrainian Domestic Icons illustrate innovative preservation methods. The study also considers the role of modern design in cultural memory plates and signage for heritage sites.

**Keywords:** design, modelling, preservation of cultural heritage, visual practices, virtual tours

## Introduction

Ukrainian culture has become especially important today. After the full-scale invasion, the world began to pay more attention to Ukraine as a global actor and to its culture as a way of forming a positive image abroad [1, 2].

For Ukraine, the representation of culture and the dissemination of cultural knowledge offer a way to affirm national identity and resilience in the face of aggression [3].

Culture serves as a way for people to communicate [4, 5]. It reveals the meaning of change, social development, and progress, and also shows achievements in science, technology, and art [6]. Culture becomes more meaningful when it can be seen, allowing it to be understood and appreciated [7-9].

To understand the value of culture, it is essential to see it. 7 Songs, stories, and poems are often transformed into paintings, sculptures, and monuments, making them available for viewing [10-13].

The paper aims how visualization and design influence the preservation of cultural heritage in Ukraine. This topic became especially relevant during the Russian-Ukrainian war, and during the active development of digital capabilities.

### **Literature Review**

Recent research shows that visual practices are extremely important in preserving Ukrainian culture [14-17].

Researchers also found that the presence of visualization and design significantly affects the preservation and development of culture and cultural monuments [16]. Digital design and visualization help preserve cultural monuments and broadcast them to a wide audience.

Research also argues that visualization and digital design are shaping metamodernism, which contributes to the preservation of cultural heritage and integrates it into the modern environment [17]. This approach shows that it is important not only to preserve cultural heritage, but also to disseminate it in modern society.

The preservation of cultural heritage has long been a global issue. Wars, natural disasters, and historical events often destroy cultural achievements. Design has therefore become an important tool to protect monuments and highlight national identity. It has long been connected with beauty and aesthetics. This connection dates back to ancient Rome and Greece [14].

Modern design mixes art and practicality. Objects and buildings are made to be useful. They are also eco-friendly. Ergonomics is considered. Each object shows its purpose clearly [18].

Design changes over time with culture and history. Modern design combines art and practicality. Objects and buildings are made to be useful, eco-friendly, and ergonomic. Each one clearly shows its purpose. Visual cultural practices share the artist's ideas. Artists use simple visual effects [19, 20].

In the work on heritage preservation in China highlights that visual practices rely on graphic representation and technology, enabling the dissemination and reproduction of cultural content while reflecting social conflicts and creative tensions [21]. The study notes that visual cultural practices do not only come from history. They arise from changes in society and new technology. Modern digital tools help plan and reproduce artistic ideas accurately [15].

Combining visual cultural practices and design has a strong impact on modern culture [22]. Art and design express the people's mindset, feelings, and knowledge [23]. Design reflects national traits such as sincerity, humor, romanticism and diverse perspectives on life in Ukraine [4, 9].

Researchers show that Ukrainian design blends functionality, comfort and practicality. This has a good historical impact on various life processes [11].

In general, recent scientific research indicates the importance of visualization and design in preserving and promoting Ukraine's cultural heritage.

### **Methods**

To carry out this study, description, analysis, synthesis, comparison, generalization, and visualization of data were used. The descriptive method showed the development of design and visualization, and the visualization and synthesis method investigated how these practices affect the preservation of Ukrainian cultural heritage. The comparative method compared the impact of different approaches on the preservation of Ukrainian cultural heritage, and the generalization method summarized the research results.

### **Results**

Visual cultural practices and design play a key role in communicating with audiences and preserving cultural heritage. Preserving the visible appearance of objects allows culture to influence the development of statehood and art. A country's culture cannot be fully understood without its cultural monuments and valuable objects. These preserved sites reflect the nation's identity and unique cultural heritage.

Very often, cultural heritage does not receive adequate funding, which makes it impossible to carry out current repairs, and therefore, we observe improper maintenance or damage to cultural objects.

Preservation of Ukraine's cultural heritage requires modern approaches, such as digital design and visualization, which indicates not only the need to preserve cultural objects, but also their digitalization, especially in times of war.

One of the important tools is 3D modeling, which provides the creation of a visual model of an object using digital technology. Laser scanning accurately measures the size and shape of an object, while photo modeling accurately reproduces the appearance. These methods contribute to the preservation and reproduction of cultural heritage.

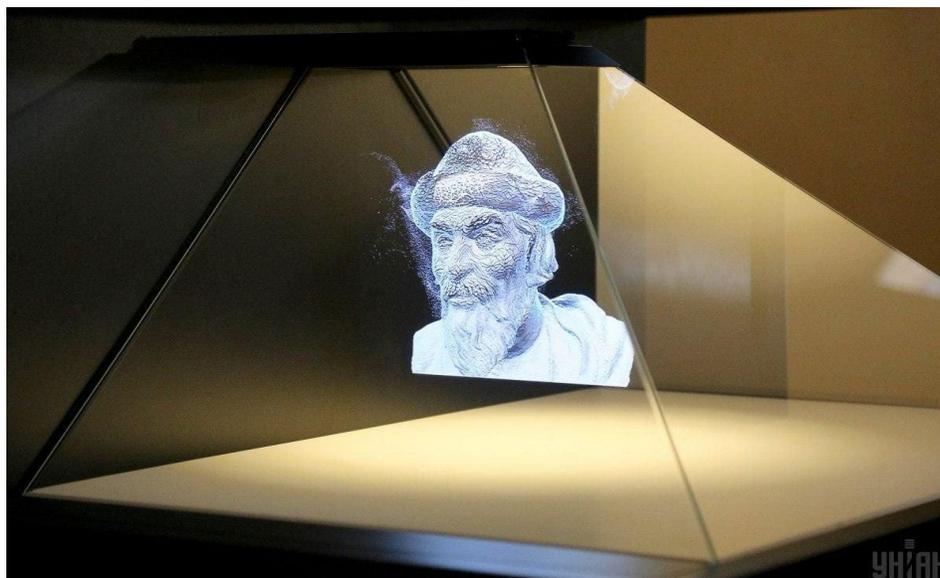
The methods currently used are presented in Table 1.

**Table 1.** Methods for Preserving Cultural Heritage

No.	Method	Description
1	Infrastructure Development	Building facilities around the cultural site to attract more visitors.
2	Creative Cluster	Turning the site into a public creative space or organizing such a space nearby.
3	Visual Preservation	Preserving the object through paintings or photographs.
4	3D Modelling	Creating a three-dimensional model, including holograms, of the cultural object.
5	Virtual Tour	Using digital technologies to recreate the site for a virtual walkthrough.
6	Heritage Signage Design	Creating uniform signs to highlight cultural objects for visitors.
7	“Greenhouse”	Integrating the cultural site into energy infrastructure or eco-friendly projects.

For example, the sculpture of Yaroslav the Wise shows his exact appearance as he looked 1,000 years ago. This sculpture is important because it shows the facial features of a man who ruled a long time ago.

The reproduction of the figure of Yaroslav the Wise is very important, since he was a great ruler of Kievan Rus. This is also the cultural heritage of Ukraine. And the 3D hologram of this great ruler was presented in St. Sophia Cathedral on March 4, 2021. The use of such approaches shows that cultural heritage can be interesting and modern (Figure 1).



**Figure 1.** 3D Hologram of Yaroslav the Wise

Source: A unique 3D hologram of the natural face of Yaroslav the Wise has been installed in Sophia Cathedral [23]

Virtual tours are also extremely important because users can visit these tours at any time, thanks to electronic technology. This means that even if the object is damaged or lost, we can see its virtual copy, which is extremely important in today's world, especially in times of war.

An example of such a museum is the Museum of Ukrainian Household Icons, which contains about 5,000 icons, making it the world's only and most extensive collection of its kind. The preservation of this heritage is essential for Ukrainian culture.

The virtual tour allows users to navigate the museum using arrows, and a magnifying glass to enlarge objects for closer examination and study (Figure 2).

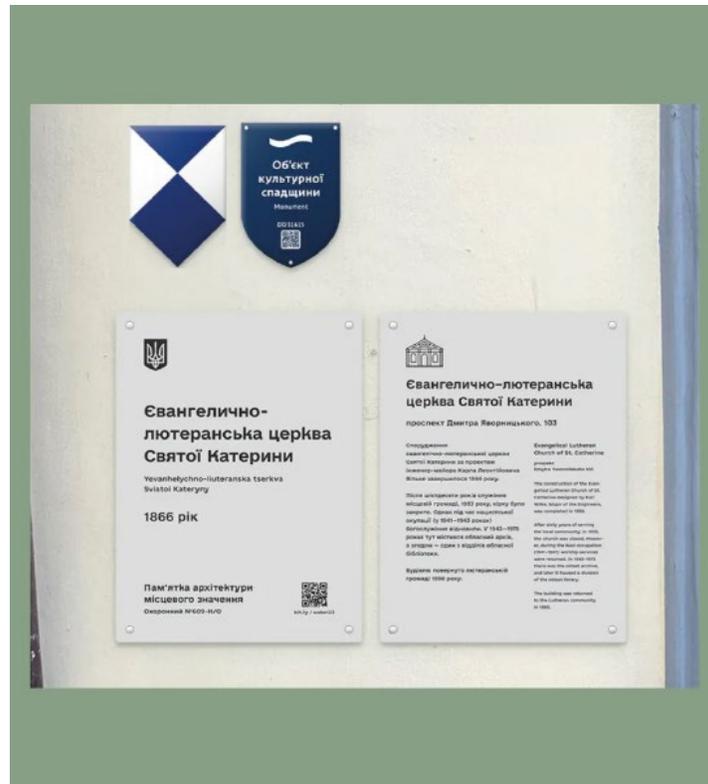


**Figure 2.** Online Virtual Tour of the Museum of Ukrainian Domestic Icons  
Source: Museum-Portal [24]

Very important in the preservation of cultural heritage is the special design of the monuments, which differs throughout the country. However, the unified system “Blue Shield” is already gradually being implemented throughout the country. There are cities where local cultural monuments have signs in the form of a blue shield with the inscription “Cultural Heritage Site”. Some communities add more information about cultural monuments on such signs.

Modern cultural heritage signs contain the address, location, description in Ukrainian and English, and the sign of the monument itself. They may also include a link to a unified register of monuments, which simplifies access to information about the cultural heritage site (Figure 3).

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**Figure 3.** Example of a Cultural Heritage Sign Design  
Source: Urbanyna [25]

Everyone must preserve cultural heritage, and protecting a monument is not just about placing a sign on a building, but about quickly obtaining information about a cultural heritage site and learning more about it.

Very often today, design techniques are used for material attraction. This includes decorating a landmark in the historical style to which it belongs, using appropriate historical objects and style. For example, famous objects are decorated in their own historical and cultural style, and neighboring cafes and restaurants also support this style.

For example, the Nahuyevich Museum-Estate in Lviv region reflects the era of Ivan Franko using the appropriate style, and the restaurant “Lelecha Oselia”, which is located nearby, also has elements of such an internal and external design that helps financially ensure the preservation of this historical object (Figure 4).



**Figure 4.** Interior Design of the Restaurant “Lelecha Oselya”  
Source: ZruchnoTravel [26]

Cultural heritage visualization practices also include augmented reality (AR), which adds digital objects to real life. This helps to better immerse oneself in the space of historical cultural heritage.

AR helps to recreate virtual reality, supplement it, and allow users to experience and understand the events of this period. For example, the National Museum of Chernobyl also uses this method. Visitors can see photos and things from this period, as well as virtually try on the suits of the liquidators. During this fitting, they can move, and the suit remains on them, which leaves an unforgettable impression and experience (Figure 5).



**Figure 5.** AR Mirror at the National Museum of Chernobyl  
Source: Urbanyna [27]

Thus, visualization and design are rapidly developing and widely used in Ukraine to preserve Ukraine's cultural heritage, but their use remains critically important and debatable in times of war.

### **Discussion**

The role of visualization and design in the preservation of cultural heritage is an extremely important and debatable issue, especially for the preservation of the national identity of our country in times of war. Different types of design approaches and visualization are needed to preserve tangible and intangible historical monuments.

Award [28] emphasizes that the preservation of cultural heritage is extremely important, especially in conditions of full-scale invasion, when the vulnerability of cultural heritage increases. This is further reinforced by the fact that the enemy attacks our cultural and historical values in order to undermine the cultural identity of Ukraine [28].

Globally, it is necessary to show the uniqueness of Ukrainian culture, where special attention should be paid to modern methods of preserving cultural heritage. Modern art practices can be inspired by new ideas, using these visualization practices for preserving culture [29].

The use of design and digital technologies allows historical cultural monuments to appear in a new dimension. This approach allows historical heritage to exist in different formats, which can inspire enthusiasts to create new works of art [30].

However, using these modern tools to preserve art requires finances and resources that may be scarce in times of war. It is also possible that preserving artistic heritage may not be a priority in such difficult times. Another problem may be the difficulty of using artistic tools in such a form, which also requires additional funding.

## Conclusion

The article is devoted to the study of virtual practices and design in the preservation of Ukrainian cultural heritage. These practices have a rather long history, but their use is currently extremely relevant.

The key findings of this study are that visual practices and design have an extremely important impact on the preservation, reproduction, and approximation of Ukrainian cultural heritage, which reflects the mentality, aspirations, and worldview of people.

The full-scale invasion has exacerbated the problem of preserving cultural and historical monuments in Ukraine, and the lack of funding and damage have made protection urgent. The use of modern technologies can greatly help in this situation.

Visual cultural practices and design are actively used to showcase Ukraine's cultural heritage in the form of 3D modeling, virtual tours, and cultural heritage signage. This allows us to make cultural heritage accessible and engaging.

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