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CONTEMPORARY TECHNOLOGY:THE
CASE OF THE “PAZYRYK CARPET”**

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ABSTRACT

This research aims to reinterpret the cultural and historical value of the “Pazyryk” carpet, which was found in the kurgans of the Hun Turks and recognized as the earliest example of Turkish carpet art through digital technologies. In this context, it is to examine the process of transforming the visual and sensory dimension of cultural heritage into new forms of expression that arouse curiosity in the audience and encourage research by animating the motifs and figures on the carpet using today's technologies, thereby enhancing the visual and sensory dimensions of cultural heritage. The study was conducted through a detailed literature review of the cultural and historical context of the motifs and figures in the Pazyryk carpet within the scope of the explanatory case study method, and an examination of similar digital applications and approaches, followed by an application study using various digital techniques, sound effects and animations on a total of 24 figures. Thanks to the digital application, the revitalization of traditional motifs with contemporary art techniques offered the audience the opportunity to build a bridge between the past and modern design, and paved the way for the reinterpretation of the universal values of the symbols of Turkish culture. By revealing the impact of technological innovations on the reproduction of historical motifs, the study emphasizes the potential of digital transformation of cultural heritage in areas such as education, art and tourism. In addition, this study is considered as an important step towards the protection of cultural heritage, blending modern art and historical narrative, and revealing the richness and historical depth of Turkish culture by reinterpreting Turkish motifs in digital environment.

ÖZ

Bu araştırma, Hun Türklerine ait kurganlarda bulunan ve dünyanın en eski düğümlü halısı olma özelliğini taşıyan “Pazırık” halısının, Türk halı sanatının ilk örneği olarak kültürel ve tarihsel değerini dijital teknolojiler aracılığıyla yeniden yorumlamayı amaçlamaktadır. Bu bağlamda, halı üzerindeki motiflerin ve figürlerin günümüz teknolojisi kullanılarak hareketlendirilmesiyle, kültürel mirasın görsel ve duyuşal boyutunun izleyicide merak uyandıran ve araştırmaya teşvik edici yeni anlatım biçimlerine dönüştürülme sürecini incelemektedir. Çalışma, açıklayıcı vaka analizi yöntemi kapsamında Pazırık halısında yer alan motif ve figürlerin kültürel ve tarihsel bağlamı detaylı bir literatür taraması ile benzer dijital uygulama ve yaklaşımların incelenmesi, ardından toplam 24 figür üzerinden çeşitli dijital teknikler, ses efektleri ve animasyonlar kullanılarak uygulama çalışmasının gerçekleştirilmesiyle yürütülmüştür. Dijital uygulama sayesinde, geleneksel motiflerin çağdaş sanat teknikleriyle yeniden canlandırılması; izleyicilere geçmiş ve modern tasarım arasında köprü kurma olanağı sunmuş, Türk kültürüne ait sembollerin evrensel değerlerinin yeniden yorumlanmasına zemin hazırlamıştır. Çalışma, teknolojik yeniliklerin tarihî motiflerin yeniden üretimindeki etkisini ortaya koyarak, kültürel mirasın dijital dönüşümünün eğitim, sanat ve turizm gibi alanlarda kullanılabilecek potansiyelini vurgulamaktadır. Ayrıca, bu çalışma, Türk motiflerinin dijital ortamda yeniden yorumlanarak; kültürel mirasın korunması, modern sanat ile tarihsel anlatımın harmanlanması ve Türk kültürünün zenginliği ile tarihsel derinliğinin ortaya çıkarılmasına yönelik önemli bir adım olarak değerlendirilmektedir.

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INTRODUCTION

From the past to the present, societies have used art as a means of communication to reflect and express their feelings, thoughts, and experiences. This situation extends from the wall paintings in the Altamira cave, which have survived from prehistory to the present day, to the motifs on carpets, rugs, ceramics, etc., from the decorations in places such as palaces and mosques, to the patterns on traditional clothes. Therefore, it is possible to say that historical artifacts that have survived to this day help to communicate with the people of the past.

Communication channels have diversified with technological developments. With the introduction of computers and the Internet into our lives, developing technology has made it necessary for many sectors to keep pace with digital transformation. Communication scientist Marshall McLuhan's statement "We shape our tools and they shape us in return" (Rigel et al., 2003), supports the digital transformation experienced with technological developments. Therefore, the fact that all kinds of information and visuals have taken their place in digital environments has enabled the development of designs and innovative approaches that are compatible with the electronic environment. In this context, the presence of information and visuals in digital media has enabled the development of new and innovative works of art and created the need for institutions and brands to attract the attention of audiences who have become desensitized to static artworks.

This study focuses on the Pazyryk Carpet, one of the most valuable examples of our cultural heritage, as technology and digitalization have arrived. The study, which uses the explanatory case analysis method one of the qualitative research approaches is limited to the Pazırık Carpet, one of the impressive textile finds discovered in Pazırık Kurgan No. 5. The transmission of the traditional weaving heritage to the present day, the prevention of its erasure from cultural memory, the preservation of traditional examples, and their teaching to younger generations play an important role in preserving cultural integrity and keeping the traditional art of weaving alive (Uğurlu, 2021). In this sense, reviving the patterns and motifs of the Pazırık

carpet through modern digital applications will increase the permanence and visibility of these motifs.

This exhibition reinterprets the symbolic and formal language carried from the past to the present by digitally intervening in the carpet's motifs and figures. The Pazyryk Carpet is not only an esthetic artifact but also a striking expression that reflects our historical identity. The deep meanings in these motifs represent our ways of life, belief systems, and culture. This study not only shows how traditional art forms can be reinterpreted in the digital age but also demonstrates the contribution of digital art projects to cultural consciousness.

LITERATURE REVIEW

1. Characteristics of the Pazyryk Carpet

According to the dictionary published by James W. Redhouse in 1890, the word carpet is of Turkish origin and comes from the word "kalî" (Redhouse, 1890). According to TDK, the word "carpet" means "an article used in the home and generally as a floor covering, which is made by weaving and knotting ropes with the desired pile height according to the pattern on the (back yarns) after the weft is thrown" (TDK, 2023). A carpet can be defined as a decorative pattern formed by weaving various motifs together in a specific order using weaving techniques.

The word motif refers to patterns formed by the regular repetition of symbols, symbols, or shapes (Hann, 2013,). Motifs are important elements that reflect cultural and social knowledge from the depths of history. These elements are processed on weaving looms and combined with various techniques, such as felt, spreading, rugs, and carpeting. Among these weaving techniques, carpet art requires high skill (Mülayim, 1996).

Traditional carpet weaving processes are shaped by the masters' years of experience and a deep understanding of esthetics, and each motif contains a story in itself. This situation enables the motifs to function not only as esthetic elements but also as symbols reflecting cultural identities. When carpet weaving is considered an art form that reflects the historical ties, habits, and lifestyles of societies, the spiritual and symbolic meanings behind each motif deepen. The richness of carpet art is also reflected in the colors,

patterns, and weaving techniques used. Each region's distinctive motifs and color palettes appear to express the traditional narratives and beliefs of that culture. In this context, the merging of motifs provides not only esthetic harmony but also cultural integrity. Within this richness, although the meanings and uses of motifs evolve and take on new forms as time progresses, their deep cultural meanings connected to their origins are preserved.

Research indicates that the Pazırık carpet, discovered in the region inhabited by Turks between 1947 and 1949, is one of the oldest known examples of knotted carpets in the world (Figure 1). Furthermore, the order in the composition of the Pazırık carpet and the symmetrical knot technique used prove that it is the first known Turkish carpet (Yılmaz, 2017). During excavations in 1949, a carpet known as Pazırık was found in the area where the fifth kurgan was buried (Rudonko, 1970). The carpet measures 1.89×2 m, has 36,000 Gördes knots per 10 cm^2 , and is woven from fine wool with a thickness of 2 mm (Aslanapa, 2005). This carpet was identified by Soviet archaeologist S.I. Dubenko and determined to have been woven using the Turkish Gördes knot technique. The carpet has impressive technical characteristics and decorations. The horseman and deer figured borders on the carpet, as well as the griffin and water lily symbols in the composition, have been found to be of esthetic and cultural importance (Sariyev, 2022).

The carpet attracts attention with its fine structure, high quality, and rich motifs (Er et al., 2012). Upon examination of the Pazırık carpet, motifs such as horseman figures, horses, horse saddle covers (slippers), waterways, deer, and water lilies can be seen. The slanted lines on the carpet give the cavalry figures a sense of direction and movement, creating the impression that they are advancing toward the battlefield. In addition to representing power, food, and transportation, the deer figures in the composition add a dynamic structure to the carpet with their walking posture. The continuous and sequential use of animal figures on the carpet aligns with the fundamental principles of futurist art in terms of dynamism and continuity (Çoruh and Terlemez, 2022). However, the origins of this style lie in the unique local artistic understanding of the Pazyryk people. In general, this approach is based on naturalistic depictions of fighting wild animals. Such visual elements

emerged because of observing wildlife and recording it through an artistic language of expression (Linduff and Rubinson, 2022). Furthermore, in visual narration, color choices, alongside figurative elements, play a major role in enhancing the narrative. The Pazırık carpet predominantly uses red, yellow, and blue colors. The warm yellow color represents the sun, happiness, energy, and intelligence, while red expresses movement, courage, and physical strength. On the other hand, the cool blue provides calmness and integrity, as well as being used as a balancing element in the composition. The combination of these colors enriches the carpet's artistic expression while carrying a deep cultural message. Therefore, the Pazırık carpet inspires admiration with its vibrant and dynamic appearance, drawing its essence entirely from nature.

The Turkish (Gördes) knot has sometimes been misnamed and misidentified in discussions about the knotting technique in the carpet, underlining the importance of the correct technical and historical interpretation (Öztürk, 2025). This shows that the Pazyryk carpet is not only an example of weaving but also an important tool in the transmission of cultural and artistic expressions from the Asian nomadic society (Sariyev, 2022; Öztürk, 2025). Throughout the historical process stretching from Central Asia to Anatolia, Turkish artists conveyed messages containing symbolic narratives that reflected their beliefs and cultural values through knot techniques. (Diğler, 2024). Patterns and colors carry symbolic meanings beyond aesthetic concerns; animal figures such as deer, horses, and lions express both nature and the connection between humans and nature (Zavitukhia, 1976). Research conducted on the remarkable textile products discovered in Pazırık Kurgan No. 5 supports this claim. The study, conducted using a sensory-materiality approach, revealed that these products are not merely material objects, but symbolic forms of expression that are perceived through the senses, supported by mythological narratives, and reflect social identity (Morris, 2024).

The carpet is considered a superior example of weaving in terms of its technical details and symbolic elements relative to the conditions of the period. In this context, it is understood that the Pazırık carpet served as an important bridge in conveying the esthetic and symbolic values of

Turkish culture, both through its weaving techniques and motifs and decorations. Therefore, the figures, colors, and patterns on the Pazyrik carpet go beyond the function of superficial decoration; they reflect the interaction between nature and humans, movement, and continuity. Thus, when considered from both an archeological and cultural perspective, the Pazyrik carpet provides important clues about the origins and development of Turkish knotted carpets. Displayed at St. Petersburg Hermitage Museum in Leningrad (St. Petersburg), Russia, and possessing a weaving technique that is exceptional for its time, the Pazyrik carpet has served as a vehicle for conveying the cultural reflection of an Asian nomadic society.



Figure 1: Pazyryk Carpet (St. Petersburg Hermitage Museum).

The importance of the horse in the history of Turkish culture is expressed in expressions such as "The horse is the wing of the Turk" and "The bird is your wing, the man is your horse" (Atalay, 1985). These words emphasize that the horse is a symbol of strength, agility, speed, esthetics, handsomeness, endurance, and elegance for Turks (Elçin, 1997). Therefore, in addition to the frequent presence of the horse in daily life of the Turks, its use as a figure in weaving is of great importance. Therefore, the horse figure on the Pazyryk carpet, which contains information about

the life of the Turks, can be considered a great helper of the Turks during their nomadic lifestyle. Moreover, 28 horses and cavalry figures on the Pazyryk carpet are depicted on horseback, while others are depicted walking (Figure 2).



Figure 2: Cavalry Figure and horse detail (St. Petersburg Hermitage Museum).

Horse saddles are depicted on the wide outer border of the Pazyrik carpet. The saddlecloths are made of felt, decorated with motifs and gold embroidery unique to Central Asia, and painted in vivid colors (Zavitukhia, 1976). The tails of horses are tied in a topknot, and their manes are cropped (Tekçe, 1993). While the letter "S" represents the concepts of immortality and eternity, the tree of life motif represents birth, life, death, and the life that continues after death (Ergun, 2004). Therefore, it can be said that the horses were transformed into works of art beyond being mere riding animals, reflecting the beliefs and aesthetic understanding of the period.

Since the geography where Turks live is an area full of harsh climatic and ecosystem conditions, this situation has triggered the importance of wild animals in their cultural beliefs. The role of the deer in Turkish mythology reinforces this cultural context (Çifçi, 2015). In Turkish culture, the deer figure on the Pazyryk carpet is a source of life and symbol of fertility. The deer animal has been a sacred creature that Turks have benefited from in many ways throughout history, including its hide, meat, milk and other, andans (Sarıyev, 2022; Yıldız, 2011). This symbolism reflects respect for the honor of natural resources and the deep connection of the Turks with nature (Kabel, 2025).

The deer was not only a hunting animal but also a symbol of strength, femininity, and longevity for the Turks who

lived in Central Asia. The deer, which are an important part of life in Central Asia, have also had an important place in archeological excavations (Beksaç, 2011), (Figure 3). The repetition of the deer motif 24 times on the Pazyryk carpet demonstrates the high cultural and symbolic value of this animal (Sarıyev, 2022; Özhancı, 2025). Moreover, figurative representations of the deer in archeological finds emphasize not only the animal itself but also the meanings attributed to it (Sarıyev, 2022; Kabel, 2025). On the one hand, the deer figure on the Pazyryk rug reflects the subtleties and beauty of nature and symbolizes the issue of social survival and struggle against difficulties. Against this background, the deer are an important representative of life and its continuity for the Turks (Sarıyev, 2022). Deer are woven in a contrasting position to cavalry and equestrian figures, and by establishing a connection through themes such as femininity and power, they also explain the relationship of Turkish society with nature, which is considered sacred (Çifçi, 2015; Özhancı, 2025). The symbols in the form of commas and large dots on the deer figure are thought to have been incorporated to add depth and a sense of movement to the work (Tekçe, 1993). In addition, the horn has been attributed meanings such as fertility, fortune, home, and power (Yıldız, 2011).



Figure 3: Deer Figure (St. Petersburg Hermitage Museum).

According to a rumor, the figure of the deer was a helper and guide for the Hun state in paving the way for conquest (Diyarbakirli, 1972). The figure of the deer, which is

accepted as the symbol of the Turkish tribes, was woven in red, white, and brown colors, based on the elements of earth and sky (Çoruhlu, 2019). Therefore, it is possible to see deer figures in different colors and forms in carpets, rugs, art, beliefs, and social life.

Research has revealed that the cross-shaped motif in the border and center of the Pazyryk carpet is a sun symbol associated with the water lily. Formal analysis has determined that this motif is an abstract representation of the water lilies, visually perceived as a star or geometric shape. In ancient civilizations, the water lily was considered a symbol of rebirth because it grows in water and is associated with the sun. Therefore, this motif on the Pazyryk carpet has become a concrete expression of the concept of “resurrection,” symbolizing both the sun and the cycle of life. Furthermore, the square composition and four-way arrangement resemble the ancient Turks’ understanding of *tört bulung* (the four corners of the world) and in this context, the origin of this symbol in the center of the carpet is based on the cultural environment of Central Asia (Tekçe, 1993). Therefore, the center of the carpet consists of 24 square boxes, six squares in length and four squares in width. Within these boxes, the water lily found on the Pazyryk carpet are positioned in the outer border and square frames, opening in four directions (Figure 4).



Figure 4: Water lily detail (St. Petersburg Hermitage Museum).

The Pazyryk people reshaped foreign images according to their local artistic understanding, imbuing them with

The Pazırık people reshaped foreign images according to their local artistic understanding, imbuing them with original meanings (Rubinson, 1990). As a result, foreign motifs belonging to cultures of other countries have integrated with local culture, beliefs, and esthetic values in Pazırık carpets, transforming into an original art form and acquiring a local identity. The griffin figure (Figure 5) symbolizes speed and courage with its striking appearance, erect ears, spread wings, and lionlike characteristics. As a mythological being defined as the ruler of the sky and the lion of the earth, the griffin represents both the social power of the lion and the reigning symbol of the eagle. In this context, the power and courage represented by the lion is more evident in the symbolic meaning of the griffin. The symbolic meaning of the griffin encompasses not only power but also wisdom, success, intuition, enlightenment, salvation, might and revenge. These layers of meaning make the griffin a mythological entity that holds an important place in Turkish culture, and at the same time enriches its place in works of art and their reflections on cultural issues (Çoruhlu, 2019). Therefore, the griffin is not only a figure but also a symbol that has left deep traces in the historical and cultural memory of the Turks. This symbol depicts the warrior spirit, deep ties with nature and mythological beliefs, thus increasing the evidence and esthetic value of the Pazyryk carpet. In addition, these unique motifs in the art of the carpet show the belief and value system of the Turks and play the role of reinforcing social identity.

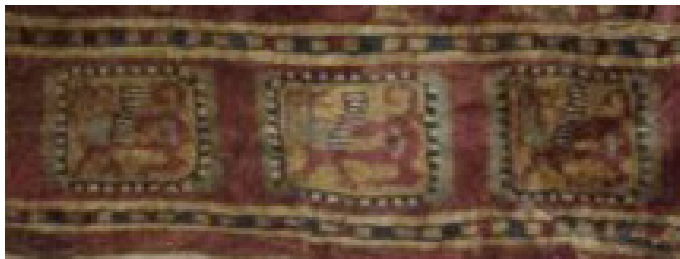


Figure 5: Details of Griffin Figure (St. Petersburg Hermitage Museum).

2. Design And Mobilization of Motives Using Contemporary Technology

Traces of motion design can be seen in paintings from the Chauvet Cave, which date back to between 31,000 and 29,000 years ago. According to research by Marc Azéma,

a Paleolithic researcher and filmmaker, when a small light or lamp is shone on the figures in the Chauvet Cave (e.g. the horse and the bull), the drawings are observed to move. With a video supporting these observations, Azéma suggests that these paintings in Chauvet Cave may be one of the earliest animated works of primitive times (Quilès et al., 2016). According to studies, the most recent occupation of Chauvet Cave is dated to $31,765 \pm 136$ B.P. (ca. 33,000 years), and the artworks there provide important clues to the development of visual expression early in human history (Quilès et al., 2016; Cuzange et al., 2007). In this context, moving figures represent an important development that reflects artistic creativity and imagination.

The paintings in Chauvet Cave are also considered valuable archeological and artistic finds, shedding light on the ways in which prehistoric human beings expressed themselves through art (Cuzange et al., 2007). Beyond drawing, the movement and dynamism of these figures help explain the deep roots of art in human history and cultural expressions. Thus, the visual artworks of Paleolithic times not only offer an esthetic experience but also contribute to our understanding of humanity's intellectual and symbolic world (Quilès et al., 2016).



Figure 6: Examples of drawings from the Chauvet Cave.

Source: https://www.youtube.com/watch?time_continue=3&v=cF4M2iIP7bg&feature=emb_logo

In line with technological developments, graphic designs used in the internet environment started to occur in our lives in the first quarter of the 1900s, especially with the development of software programs. The Java software program developed through “Sun Microsystems” has become an important tool for producing interactive animations (Uğur, 2001).

Today, software technology is making great progress with the technological innovations it provides and makes significant contributions to the production of animations as well as motion graphics. The use of motion graphics has a wide range of applications in many fields. These areas include motion graphic design, movie credits, motion graphic designs we encounter in television broadcasts, motion graphic designs on the internet and motion graphic designs used in interactive environments. In addition, the widespread use of animated logo designs on the internet opens a new area of use for this graphic type. The transformation in the field of graphic design with the impact of technological developments increases the importance of interactive and dynamic content and offers new opportunities for designers.

While 3D Studio Max, Maya and Cinema 4D programs are generally used in three-dimensional motion graphics designs, software programs such as Adobe After Effects, Adobe Animate and Adobe Premier are used in two-dimensional designs (Meyer & Meyer, 2010). The film *Loving Vincent*, which was prepared with the help of these software programs, is a biographical animated film produced by film director and painter Dorota Kobiela and screenwriter Hugh Welchman in 2017. A co-production between Poland and the United Kingdom, the film is based on 120 works and 800 letters written by Vincent Van Gogh, one of the most important artists of the 19th century. Called “an extraordinary movie made of paintings”, the work is about the life of the painter and the kind of person he was. The images in the animated movie are drawn with oil paint on canvas and transferred to the screen with the help of a projector. The 80-minute animated movie is composed of 56,800 hand drawings (Figure 7).

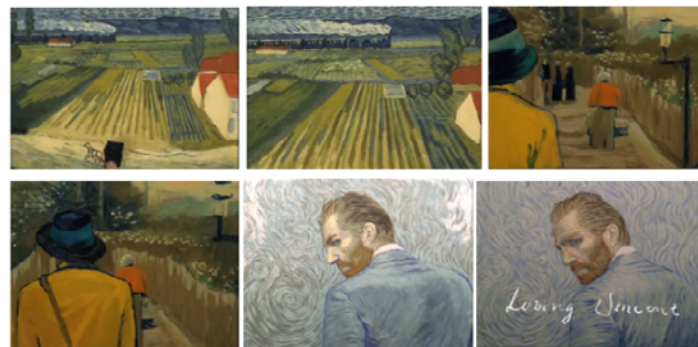


Figure 7: Dorota Kobiela and Hugh Welchman images from *Loving Vincent* Source: <https://www.youtube.com/watch?v=ijihxtr1JHI>

The digital revitalization of historical patterns increases audience engagement with these works and makes art more accessible. With the deepening relationship between digital art and technology, such works play a vital role in the preservation and dissemination of cultural heritage. Interactive art practices, in particular, increase audience participation in their artistic experiences, allowing them to develop a more meaningful and deeper understanding. One example of digital art that combines traditional motifs with a modern esthetic is the work of Italian designer Giovanna Crise, in which she animates patterns in historical sites in Andalusia (Figure 8). In this work, the visuals are brought together by video; these visuals can be seen in Figure 8. Crise shared this 60-second video on his social media account @ciofanadrage, and his work has received great acclaim worldwide. This work presents an important example of the transition from tradition to modernism in digital art. Crise also reveals the effects of digital technology and social media platforms on the dissemination of art and reach its reach to audiences. Social media allows artworks to spread rapidly on a global level

and provide instantaneous interactions. In this context, the future of digital art is built on the integration of traditional art forms with modern technologies, thus strengthening both artistic and social interactions.

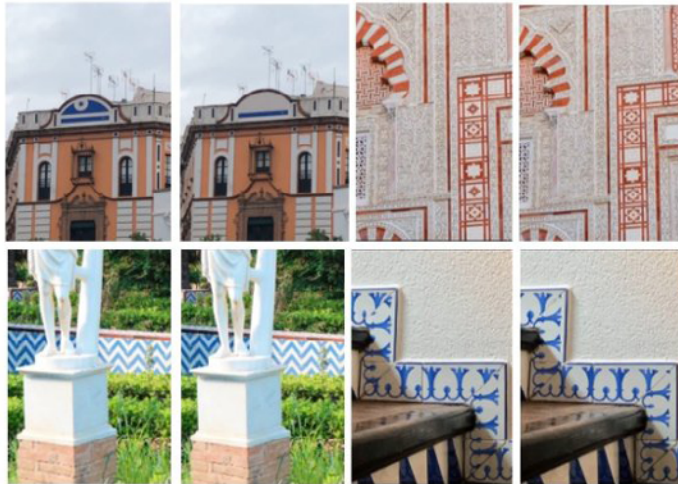


Figure 8: Images of the movements she gave to the patterns in the architectural details of the city of Andalusia (Motion Designer: Giovanna Crise). Source: <https://www.instagram.com/p/Ck8nIF3LiJ/>

Inspired by the creative idea of Italian designer Giovanna Crise, Turkish designer Görken Topsakal has brought movement to the pattern details of historical architectural structures in Istanbul, such as Vakıf Han, Topkapı Palace, Sirkeci Station and Molla Zeyrek Mosque. Known as a musician, advertiser and designer, Topsakal named this first application work “Patterns of Istanbul No. 1”. In the work, the colorful mosaic stained glass windows and tiles of four historical buildings are animated, while drawing attention to the rich patterns of these architectures in the interior and exterior spaces (Figure 9). Topsakal's other work, “Patterns of Istanbul No. 2”, animated sections of historical buildings such as Tiled Pavilion, Şehzade Mosque, Mahmut Pasha Tomb, Sirkeci Liman Han and Sirkeci Station. These works were shared on Topsakal's Instagram account @topsakalgorkem and aimed to offer viewers an interactive experience with historical buildings. Topsakal's project offers a suggestion on how traditional architectural elements can be combined with modern technologies. The work revitalizes the historical fabric of Istanbul and hints at how traditional art can find a life in the digital age. Such innovative and interactive projects increase the

accessibility of art and contribute to the revitalization of cultural values through modern design. Motion graphics emphasize the intense aesthetics of historical buildings, while innovatively expanding viewers' perspectives on cultural heritage. Such projects deepen the relationship of digital art with history and culture, allowing viewers to make connections between the past and the present.

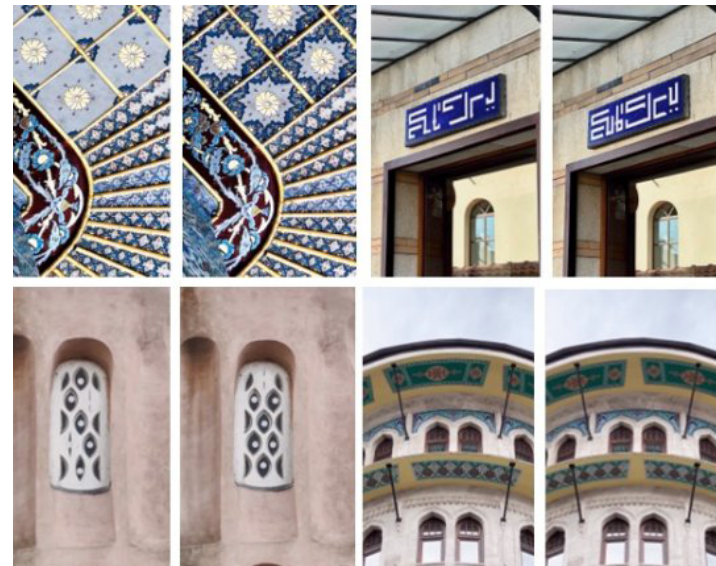


Figure 9: Images of the movements he gave to the patterns in the architectural details of Vakıf Han, Topkapı Palace, Sirkeci Station and Molla Zeyrek Mosque (Motion Designer: Görken Topsakal). Source: <https://www.instagram.com/p/Cpk8Elijo3ax/>

METHOD

This study deals with the process of reinterpreting the Pazyryk carpet, one of the oldest examples of traditional Turkish carpet art, in the digital environment within the framework of qualitative research approach. The research is based on a combination of literature review and practical work within the scope of the descriptive case study method. This method provides an appropriate framework for an in-depth study of a particular historical artifact and its cultural connotations, to understand the social, cultural and historical context of the event. In the first stage, the historical and cultural context of the Pazyryk carpet, the meanings of the motifs used and traditional interpretation approaches were examined through a comprehensive literature review. Existing knowledge about the historical significance and artistic values of the carpet was compiled.

In this phase, previous studies and similar examples of practices related to Turkish carpet art, cultural heritage and the impact of digital technologies on traditional art were evaluated.

The figures and motifs in the Pazyryk carpet were examined in detail by separating them into layers in Adobe Photoshop program. At this stage, the necessary scenes were created using the basic tools of the software for the separation of the motifs into layers, harmonizing the background color and animating the motifs. The animations were realized with scene transitions in a certain order. First, the deer figures on the inner border of the carpet were animated, followed by the cavalry and horse figures on the outer border. This stage was combined with video montage in Adobe After Effects program and enriched with sound effects. This phase was shaped in the light of the findings on how we can keep the historical value of the Pazyryk carpet alive today. Thus, an approach is presented that aims to analyze the Pazyryk carpet and its meaning in depth by combining it with today's technology. Furthermore, this study is considered as an important step towards revealing the richness and historical depth of Turkish culture.

This method reveals how traditional art and modern technologies can be brought together through a concrete example and addresses the digital transformation process of cultural and historical values with a holistic approach. The results shed light not only on the reinterpretation of the Pazyryk carpet but also on the applicability of similar digital applications for other cultural heritage items.

RESEARCH FINDINGS AND IMPLEMENTATION PROCESS

In this research, studies on the mobilization of historical motifs were examined, and the process and stages related to the mobilization of the patterns and motifs on the carpet are discussed in detail. The visual representation of these stages is given in Figure 10. In the preparation phase of the application study, the Pazyryk carpet was transferred to Adobe Photoshop program, where the Pen Tool used in the design process was used to layer the deer figures and horsemen (Figure 10a, 10b). This process allows for more precise work on the motifs. In addition, the border with the deer figure and the cavalry was cleaned with the Clone

Stamp Tool with colors suitable for the ground (Figure 10c, 10d). In this way, the figures have gained a more natural appearance. The feet of the horizontally positioned deer figures on the Pazyryk Carpet were copied using the Clone Stamp Tool with the footstep movements. By changing the position of the animal according to its steps, a walking effect was achieved. This technique plays an important role in making the audience feel the realism of the movement. At the same time, the inclusion of new deer figures in the stage area gives the work a filmstrip effect, which creates a visual dynamism in the viewer.

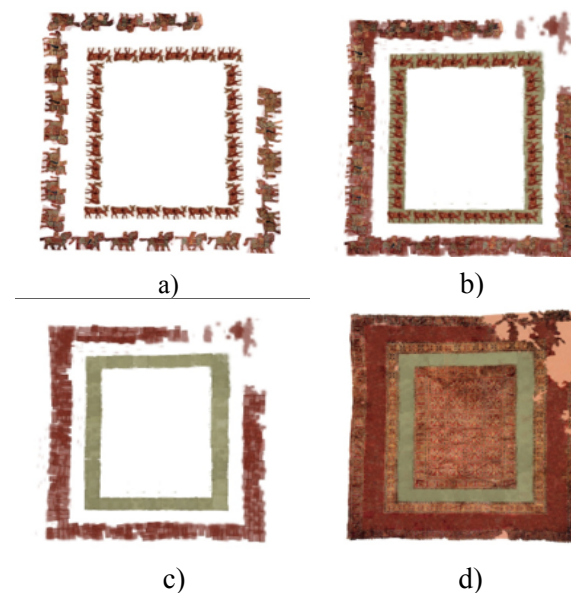


Figure 10. The process of erasing the background of Pazyryk Carpet, separation of motifs and figures into layers in Adobe Photoshop

The Pazyryk carpet has 28 human and horse figures placed in a wide border around the edges. The tails of the horses are knotted, and human figures are depicted walking on or beside the horses. The cavalry figures in the lower-horizontal and upper-horizontal positions in the carpet turn their heads back to look in front of them again to create a moving scene (Figure 11a-b). The figures are then observed to assume the driving position by grasping the mane of the horses. The horse and cavalry figures in the right and left borders of the Pazyryk Carpet are left in their original (motionless) position for the integrity of the design; however, the head of the horse figure is allowed to move up and down (Figure 11c-d). This form increases

the dynamism of the design by giving the viewer a sense of movement. The cavalry figure in the driving position is positioned in such a way that the horse's gait creates the effect of back-and-forth movement in its body. It is also noted that in the Pazyryk carpet, some cavalymen stand next to the horse by holding on to its mane. The interaction of these figures with horses increases the depth of the visual narrative by providing a unique storytelling. This shows that the relationship between horses and cavalry represents a deep cultural symbolism in the historical context.



d)

Figure 11. Screenshots from the horse and cavalry Figure Mobilization

- a) The letter “S” or hook motif on the horse's saddle cover of the Pazyryk carpet points to important sub-messages symbolizing concepts such as eternity, immortality, birth and death. While this motif reflects the deep layers of meaning and universal values in Turkish culture, it also adds richness to the artistic expression of the carpet. The navy-blue trousers on the cavalymen of the carpet are used to represent fertility, and this choice also offers a depth of meaning in the aesthetic sense. The footstep movements of the horizontal and vertical horse figures in the upper and lower sections of the carpet were copied with the Clone Stamp Tool. With this technique, the walking motion of the animals is provided in a more natural and dynamic way by giving direction to their steps. In addition, new horse figures included in the border area support the movement effect (Figure 11). This approach is not only a visual experience but also emphasizes the dynamic aspects of movement that belong to life and nature. In the second wide border on the edge of the carpet, a total of 24 deer figures are woven in successive rows. The work of animating these figures consists of 20 scenes in total, including deer bowing their heads (Figure 12a), raising their heads (Figure 12b) and walking (Figure 12c). While the deer are left in a motionless position within the border, they are made to move by raising their head and walking. These applications aim to bring the figures in the carpet to life and offer a deep visual experience to the viewers.
- b)
- c)



Figure 12. Screenshots from a Deer Figure Mobilization

It is noteworthy that the water lily is used in two different areas of the Pazyryk carpet (Figure 13). The water lily motif on the third border, which is separated from the outer borders, emphasizing the importance of the motif in the design. Furthermore, in the center of the carpet, a total of 24 water lilies are placed in squares arranged in 6 lengths and 4 widths. While the water lily carries the meaning of beauty, elegance and wisdom, the concept of sovereignty expressed in yellow, and the concept of mother earth symbolized by brown offer a deep cultural coding as well as the aesthetic value of the carpet. The fact that the total number of figures and motifs in the carpet is 24 can be considered to represent the total number of tribes of Turkish tribes. This situation shows that the Pazyryk carpet is not only a visual work of art, but also a historical and cultural expression tool. In the last scene of the Pazyryk Carpet application study, a randomly selected figure among the 24 water lilies in the center of the carpet was animated. In this process, Adobe Photoshop's cloning tool was used to erase it in accordance with the background color. While the erased frames are opened in the next scene, another frame appears to be closed (Figure 13 a-b). Therefore, the opening and closing of the water lily petals creates a

cyclical repetition of the two scenes, offering the viewer a dynamic experience.



Figure 13: Section of the Water Lily Mobilization

In the application study of this article, the motifs on the Pazyryk carpet were divided into layers by separating them from the structure they were in using Adobe Photoshop. The figures and motifs were layered, considering the colors and textures of the ground. While this process made the details of the carpet more prominent, it also increased the visual esthetics. In most of the application work, the "Clone Stamp Tool" in the tools bar of Adobe Photoshop was used effectively.

The Pazyryk carpet mobilization video lasted 26 s. At the beginning of the application phase, deer in the inner border were animated. While the deer in the upper and lower stripes of the border are walking, the head of the deer figures in the left and right stripes are observed to move up and down (Figure 14). This presents a dynamic scene to the viewer and adds a modern interpretation to the traditional motif.

In the second stage of the application, while the deer figures remained fixed, the cavalry and horses in the outer border of the carpet were animated. The cavalymen looked in front of the horse, held the horse's halter, turned its head back, and then turned forward again, putting them in the driving position. At this stage, when the horse lifts its head from below and starts walking, the cavalry at the upper and lower borders is also animated. However, the cavalry on the right and left remain in a motionless position.

This design choice enhances the richness of the scene by emphasizing the contrast between movement and posture. Finally, the 24 water lilies in the square in the center of the carpet are animated. These motifs are animated as they open and close between randomly selected water lilies. Such movements add a dynamic dimension to the esthetic structure of the carpet and draw the viewer's attention. In this process, each movement created in the program was recorded and then transferred to the Adobe After Effects program. Here, it was turned into a video. In the editing phase of the application, sound elements specific to nature and moving figures were used, considering the relationship between the movements of the figures and music. The sound of deer, horse footsteps, horse neighing and gunshots were included as elements that enrich the viewer experience. In this way, digital innovations to the Pazyryk carpet offer not only visual but also auditory experiences.



Figure 14: Screenshots of the Pazyryk carpet animation phase.

CONCLUSION

Social media platforms, which have entered our lives with technological developments, have caused people to turn to new searches through rapid information flow and trends. In this direction, traditional motifs, floral and geometric ornaments and symbolic animal figures are reinterpreted by making them compatible with the digital environment. The revitalization of cultural values in digital environments gives artists new perspectives in the production, design and exhibition stages of the works.

This study focuses on the Pazyryk carpet, the oldest example of Turkish carpet art. The carpet in question is a

historical and cultural expression tool that extends beyond weaving. The colors and figures used in weaving reflect Turkish culture and spiritual values, beliefs, lifestyles, and relationships with nature. By creating a work compatible with today's technology, the motionless motifs and figures on the carpet have been given movement. The preference for 24 figures and motifs during the application phase indicates the number of Turkish tribes. The fact that the horsemen moved in opposite directions indicates that they performed a ritual according to the belief system of that period. The yellow color used in water lilies emphasizes dominance, and brown emphasizes the concept of mother earth. The tree of life, the ram's horn, the letter "S" or the hook motifs convey sub-messages such as eternity, immortality, birth and death. The scenes are enriched using sound effects, such as the sound of deer in the movement scenes of the deer and the sound of horse footsteps and neighbors in the movement scenes of the horsemen.

The vivid and animated depiction of the figures on the Pazyryk carpet shows that this weaving is also a historical and cultural narrative tool. How the symbolic movements on the carpet are dramatized with the techniques used and how historical depiction creates new narratives when combined with contemporary art are discussed in detail in this study. Thus, traditional Turkish motifs, combined with modern art techniques, revitalize the traces of the past and make cultural richness and historical awareness visible.

This study highlights the importance of reinterpreting the historical motifs of the Pazyryk carpet through digital technologies. This practice provides a concrete example of how cultural and esthetic values can be reproduced today. While digital approaches enable traditional motifs to discover a new life, they also draw attention to the meanings of symbols belonging to Turkish culture. The motifs and colors in different parts of the carpet reflect Turkish society's lifestyle, belief system, and relationship with nature. Traditional motifs, enriched with moving figures, come to life again in a contemporary design language, thus offering viewers the opportunity to bridge the gap between the past and modern esthetics.

The current presence of diverse information and visuals in virtual environments today makes digital compatibility

and innovative approaches almost mandatory. The new possibilities provided by technological developments in the design process allow historical motifs to be interpreted endlessly. Consumer expectations and design trends require remarkable, impressive, and exciting designs to meet increasing message density. In this study, by focusing on the motifs in the Pazyryk carpet, it aims to give movement by using contemporary technology and to encourage the audience to investigate by making them curious. The Pazyryk carpet, a historical artifact, is transformed into an interactive art form through contemporary technologies and offers viewers the opportunity to connect the past with modern design. This example demonstrates how historical heritage can be revitalized from a modern perspective; it also constitutes an important model for reproducing and experiencing cultural and esthetic values today. In addition, this study is a recommendation to the Ministry of Culture and Tourism for use in museums and digital platforms.

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Author Contributions

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