

The Impact of Digital Technology on Contemporary Mural Art

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Abstract: This research aims to study contemporary mural painting in societal culture, the formal and aesthetic characteristics of this art form, and the re-emergence of murals in architecture. and the advanced techniques of today's muralists and how they relate to technology. The objective of this study includes using (2) samples from the western community and content analysis was conducted using the qualitative method. The study found that Mural art is one of the branches of painting and design that is concerned with the decoration of the ceilings and walls of buildings, and there are types of contemporary mural paintings, including figurative, sculptural, and ceramic murals. And the diversity of mural painting methods in terms of materials and raw materials used. Contemporary mural painting has been influenced by several factors: contemporary mural design (techniques, materials, contents, and concepts); environment; light; material; scenes; environmental climate; architectural style of the building and its relationship to mural design; and the function of the building. Consequently, In the body of knowledge, this study benefits research in the field of Art painting and design and also policy makers. The study further recommends other researchers to explore other virgin areas related to the contemporary digital technology relates to the mural art.

Keywords: Augmented Reality, Contemporary Architecture, Mural Painting, Wall Art.

I. INTRODUCTION

Mural art, or wall painting in general, is one of the earliest forms of human plastic art; its earliest remnants have been discovered in caves and on the walls of ancient buildings. Mural painting is intrinsically connected to the nature of society, the environment, and architecture—especially architecture, both ancient and modern—as an expressive, cultural, and civilised means of introducing customs, traditions, religious and social rituals, and a statement of the heritage and thought of society (Abbas & Abdo 2016; Mustafa et al 2013).

Contemporary murals are no longer just a decoration for walls, but have rather become a tool for expressing political, social, and other opinions. The use of modern technology for materials, tools, and techniques in contemporary mural design reflected the role of aesthetic, cultural, and affiliation art and thus led to a deeper concept of contemporary mural painting, which contributes to enriching the aesthetic experience and raising aesthetic awareness (Altai, 2016). Murals play an important role in the unity and cohesion of the architectural form, but they derive their great importance from the themes they present and the content they provide for the prevailing ideological or intellectual content. This role achieves the extent of architectural form with function. The mural design is inextricably linked to the specific function of the architectural object, whether dogmatic, representing themes from public life, or abstract forms, and this results in profound sensual and didactic ideas and dimensions. Therefore, it plays an important role in educating the masses and developing their cultural level, and contacting them in the streets, squares, and buildings turns the city into a huge canvas, which raises the level of taste and awareness of the masses (Sagini, 1980).

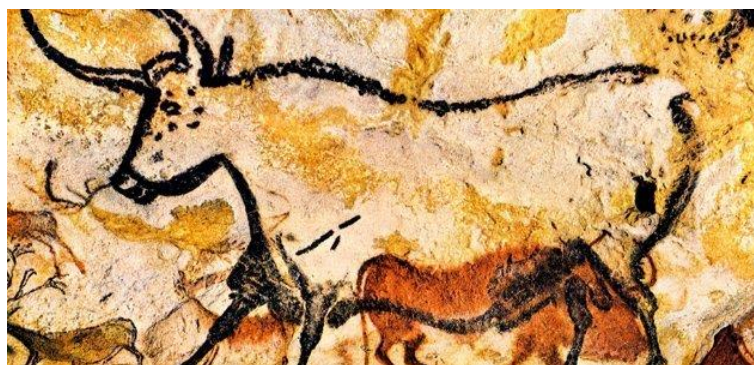


Figure 1. Aurochs in the Great Hall of the Bulls. The prehistoric artist has executed the drawing on a support that is partially covered in calcite: one of the horns is on a thin, almost continuous deposit of calcite (white), the other is partly on bare rock. The discontinuity of the painting at the withers and on top of the breast is a result of a block of rock detaching from the vault after the execution of the prehistoric drawing (Malaurent et al., 2006).

II. CONCEPT CONTEMPORARY MURAL PAINTING

At the beginning of our talk about the subject of mural painting, we must define mural Painting and for the sake of personalization as well, we will define what is the concept of mural because often concepts are mixed about the nature of mural images and hanging

paintings. Here, the meaning must be clarified, and the mural is defined as “a work of art directly related to the wall or ceiling, either through direct drawing, sculpture, or installation of tiles and ceramic pieces, or multiple materials and different media. strongly in the language of art, which all its connoisseurs comprehend (Rushdie et al., 2019). According to Abdel Aziz et al (2022) also defined Mural Painting is also defined as “one of the branches of Painting and design that is concerned with the decoration of the ceilings and walls of buildings. Thus, mural painting differs from other forms of Painting in its organic connection with architecture. Through its design, and its use of color, it can change the sense of the special proportions of the building, to become part of the public entity. Architectural Inclusion. There are also types of contemporary mural painting, including figurative, sculptural, and ceramic murals (Carabal-Montagud et al., 2017).

III. TECHNIQUES AND MATERIALS USED IN CONTEMPORARY MURAL PAINTING

There are many methods of wall painting in terms of the materials and raw materials used. There are oil colors, frisks, mosaics, ceramics, and enamels, preserving their brilliance and beauty, and carrying plastic and expressive values for generations and generations (Shalaby, & Reham, 2019). He also used new contemporary materials in mural painting, such as: "Contemporary fresco appeared in America in 1996 in Los Angeles, where he replaced lime, sand and water with colored cement with oxides and pieces of glass inserted with it, and with technique and technique. Progress New materials were used to trade with modern development, such as: plaster and latex paste (Abdel-Rehab 2019) There are other modern techniques to show the aesthetics of contemporary mural painting, such as acrylic, polyester, and epoxy (Khojali, 2017).

IV. THE RETURN OF CONTEMPORARY MURAL PAINTING IN EUROPE

The art history of the late nineteenth and twentieth centuries records artistic re-integration, the desire of the arts to become part of a harmonious whole again. Thus, the liberation of the "applied" arts can be understood in terms of the state of the "fine" arts in turn-of-the-century movements such as Art Nouveau, Secession, Jugendstil, or Modern Style. For Van de Velde (painters and sculptors) to specifically portray this liberation as reintegration into the total artwork that is the designed ocean, and W. Gropius refers to the "unity of the soul that rises to the level of the miracle of the Gothic cathedral", artists (painters and sculptors), let us break The walls are built by our warped pedantry among the "arts" so that we can all become builders. The aim of the arts was to become architecture (Porkar, 2013). An effective way of returning to and approving the relationship between architecture and art would not be the artificial introduction of some decorative element or the aesthetic of creativity, but creativity with the initial participation of artistic principles (Dutsev, 2018). The association of the collage with its function is considered very close to realism, as the content is easily recognisable in its reception and comprehension, while abstract art was seen as impersonal and meaningless as the artistic practices of working side by side were re-integrated between architects, painters, and sculptors; Where the features of the assembly began with the artistic conception occurring simultaneously on different levels of the individual focusing in himself on more than one artistic practice, it was clear that the avatar that responded to this was Le Corbusier's "architect" (Torrent, 2010).

More specifically, the separation of mural painting from architecture began in the Renaissance, especially after the use of oil colors in mural painting, so architecture took for itself decorative architectural elements, or surfaces of raw materials that differ in color or texture instead of mural painting to beautify the surfaces, and the exploitation of the image helped to The wall The emergence of the bourgeois class, and mural painting became a kind of adornment of life, and a means of sensually satisfying this class. The picture gradually separated away from its previous ideological goals, to be replaced by the silent, natural, personal picture. In the modern era, several attempts to revive contemporary mural painting appeared at the end of the nineteenth century, such as: Hans van Mars and Puvis de Schiffan, but they were not all successful. In the twentieth century, the emergence of contemporary murals appeared in several aspects, and it was a return to mural painting, after the influence of photography in the methods of modern art. The petition (Al-Sajini, 1980). In the nineteenth century, the artist (Anthony Gaudi) combined the vision of the photographer with the philosophy and skill of the architect, as his architecture is a contemporary record of the beginning of a qualitative leap in the reality of mural painting, and he is the designer of the most important architectural groups in Barcelona, Spain, where we note that his buildings constitute a new beginning in The relationship and the return of the wall work to architecture, or more generally “the relationship of architecture with the rest of the arts, photography, sculpture and decoration; contemporary wall work is part of architecture, but it is part of its spatial structure, as the relationship between the architectural form and the architectural mass illustrates the aesthetics of the composition resulting from this distinctive relationship as a whole With the environment; then showing and illustrating the return of contemporary mural painting to architecture and linking architecture, the mural blocks with contemporary murals emphasize beauty and function (Hanafi, 2011).

V. FACTORS AFFECTING THE DESIGN AND IMPLEMENTATION OF CONTEMPORARY MURALS

Since the early 1960s, frescoes have been decorating the exterior walls of buildings in many European cities (e.g., Vitoria-Gasteiz, Berlin, etc.) e.g., American (Philadelphia, Los Angeles, Chicago, etc.), as well as in many Italian villages (at eg Dozza, BO; Maglione Canavese, TO; San Sperate, CA; Orgosolo, NU, etc.). Artists did not pay attention to the characteristics of low-quality materials and products, which were not made to withstand external environmental conditions. After several decades of exposure to extreme weather conditions (eg sun, heavy rain, humidity, wind), frescoes began to show evidence of destruction such as severe breakdown of binders, chalk, cracks and discoloration of paint layers (Melchiorre Di Crescenzo M, et al., 2014). Contemporary mural painting is affected by several factors, namely: contemporary mural design (techniques, materials, contents and concepts), environment (everything that surrounds humans and is divided into natural and civilized), light (natural or artificial lighting), material (materials used), scenes (psychological and psychological aspects), Environmental climate, Architectural style of the building and its mural design, Function of the building (Suleiman, 2019).

VI. ART AND TECHNOLOGY MEET IN AUGMENTED REALITY MURALS

The 20th century was marked by a significant increase in scientific activity, which in turn influenced the nature, structure, and meaning of artistic creation; hence, the scientific community came to be identified with the fine arts; Two-dimensional images and murals are a huge source of knowledge regarding form and content, especially when projected onto solid and hard surfaces, giving rise to a new era steeped in "aesthetic modernity" characterised by the rejection of all restrictions that hinder individual consciousness (Mohammed, 2019). Furthermore it, Artists invested all the data of technology and employed them in artistic murals throughout the various stages of art history, and given the nature of art and its connection to contemporary culture, and this was clearly and clearly seen in postmodern arts because of the technological development that accompanied it in multimedia of different materials and tools, and murals entered in Many artistic trends in postmodern arts, such as interactive art, for example, what we see clearly in the digital mural by the artist Marcos Lernr in Munich - Germany (2007), in which digital technologies were employed to produce a luminous mural (Al Jaryan, 2013).

In a related context, the design idea develops in the digital environment (including the artistic mural environment itself), in most cases from ideas presented by dynamic practical means; The relationship between tactical computer manipulation (which has been facilitated with new software) and the development of the digital form can be explored in mural art, as well as the ability to select materials, components, and structures for the digital form, and because of the potential directness of design manipulation on the form, exploration of the exterior is straightforward. also. The design vocabulary of murals is chosen on the basis of its relationship to the content and importance of the place, and the methods of dealing with these vocabulary differ between experimental, expressive and symbolic because they are vocabulary that enters the composition of the design and is not a goal as a unit in itself (Al-Bayati, Najm, Al-Bayati, Nimr, 2016).

As a result of digital development, a new type of technological application has recently emerged called "Augmented Reality", a type that combines physical reality, digital information and images; Through this development, specialized applications were used in the fields of visual arts, and this technological boom affected the field of mural painting, as there were two ways to view the artwork, either with the naked eye as usual, or through "augmented reality" applications designed by the artist in partnership with a software company . The viewer can see any mural in its form as a combination of colors and stripes on the wall, but the technology wanted to revive this image, by downloading a special application provided by the artist in partnership with a company to provide visual or audio effects to work, and when the recipient turns on the camera on the mural, it begins These effects come to the surface, and here the mural shifts from 2D realism to 3D realism, becoming a precursor to a different and exciting technological experience. (Soliman, 2019; Nabil, 2022).

It should be noted here that there are multiple models for those murals that come as a work of art that mixes reality and fantasy, and color with advanced technological applications, and thus strongly generates a kind of art that erases the spatial barriers that make street art a criminal act, and thus the legitimacy of the street is transmitted to the public; The designers of these applications hope to contribute to the creation of an amazing and innovative artistic world (Nabil, 2019). Where the city of Miami, Florida, USA, witnessed an important artistic event in one of the Walls Wynwood-Basel Art complexes, where many murals were implemented using Augmented Reality (AR) technology and as in Figure (2), in partnership with the "Digital Artist", It is a clear evidence of the influence of plastic art on applications and technology (Metrick-Chen, 2015, p.111; Nabil, 2019; Karlin, 2013).



Figure (2):Wynwood Walls, Art Basel, Miami, Florida, 2012. This project was sponsored by the Goldman Properties.

Meanwhile, South Florida-based artist Lewis Vale has painted murals all over Miami, as part of a project called Augmented Reality. Using the Muse app, viewers can enjoy an augmented reality experience and view a 3D model of his artwork. The viewer can choose to see any mural in its fixed form as a set of colors and lines on the wall, or choose to see it differently using digital technology, as he downloads one of the special applications provided by the artist in partnership with a specialized sound effects company, as soon as the viewer points his smartphone towards the painting mural to see for action; As in Figure (3). In addition, the viewer can see any mural in its form as a set of colors and lines on the wall, but the technology wanted to revive this image, by downloading one of the special applications that the artist provides in partnership with a company to provide visual or sound effects for the work, and when he By turning the camera on the mural, these effects begin to appear on the surface, and here the mural turns

from two-dimensional to three-dimensional realism, and becomes a prelude to a different and exciting technological experience (Kendall, 2018; Vert et al., 2019).



Figure (3): Eduardo Kobra's Art Salvador Dali mural in Miami, Florida.

VII. CONCLUSION

Contemporary mural art is one of the branches of painting and design that is concerned with the decoration of the ceilings and walls of buildings, and this indicates that there are types of contemporary murals, including figurative, sculptural, and ceramic murals. The diversity of types of architecture leads us to the diversity of mural painting methods in terms of materials and raw materials used. Oil paints, brushes, mosaics, ceramics, enamels, etc. In addition, we find that contemporary mural painting has been affected by several factors: mural design in terms of (techniques, materials, contents, and concepts); environment; light, material, scenes; environmental climate; the architectural style of the building and the relationship of the mural design to it; and the function of the building. The latest marginal techniques have also made a qualitative leap in our understanding of art, and this is clear evidence of the merging of art and technology. Technology has changed the way we view art, so we can see what is static, moving, and in 3D. This helps to understand the link between art and technology and the extent to which techniques are adapted in the artist's hand. In particular, we find that augmented reality had a major role in proving this connection through the murals of the artist (Eduardo Kobra's) and how the viewer understood the various paintings, and this is a new future in the world of mural painting.

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