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Renaissance of watercolour painting in the XXI century: Trends and prospects

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Abstract

This paper examines the phenomenon of the renaissance of watercolour painting in the 21st century. The study focuses on two key development trends: the use of mix-media technology and the digital transformation of watercolour art. Innovative materials and technical solutions are analysed, including the use of propylene gels, structural adhesives, and modelling creams that significantly expand the expressive possibilities of watercolour techniques. Particular attention is paid to the integration of digital technologies into watercolour painting, including the creation of virtual exhibition spaces and the use of three-dimensional modelling software. The main consequences of digital transformation are identified: expansion of expressive possibilities, democratisation of art, transformation of the creative process, and the emergence of new formats of perception. The results of the study demonstrate the formation of a new aesthetic paradigm, which in the future will be based on the synthesis of traditional and innovative approaches

Keywords: Watercolour Painting; Mixed Media; Digital Transformation; Innovative Materials; Virtual Space; Art Technologies; Multimedia Art

1. Introduction

The relevance of this study is determined by the significant transformation of the role and place of watercolour painting in the contemporary art space of the 21st century. The observed renaissance of watercolour techniques is characterised by the synthesis of traditional methods with innovative technological solutions, which form new artistic practices and expand the expressive possibilities of this art form. The study of this phenomenon is particularly significant in the context of the digitalisation of the artistic sphere, the development of new materials and techniques, and the changing methods of presentation and perception of artworks. The active implementation of digital technologies, the emergence of virtual exhibition spaces, and the multimedia formats of presenting watercolour paintings require a systematic analysis of modern development trends and the prediction of prospective directions for their evolution. Examining these issues is crucial for understanding the integration of classical artistic heritage into contemporary visual culture and determining future pathways for the development of watercolour painting in the context of the technological transformation of the art environment.

2. Material and Methods

The analysis of several scientific studies on the main trends in the development of watercolour art has identified the following significant directions: the active use of "mixed media" in watercolour painting, which manifests in the combination of traditional watercolour techniques with other artistic materials such as acrylic, ink, pastel, as well as the application of unconventional materials and textures [1]. Simultaneously, there is a stable trend towards the transition of watercolour painting into the digital space, which includes both the creation of digital watercolour works and the digital processing of traditional watercolour paintings, the use of software to simulate watercolour techniques, and the

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integration of watercolour painting into the context of new media and the development of hybrid forms of artistic expression. These trends reflect the overall process of modernising traditional artistic practices and adapting them to contemporary technological capabilities and the demands of the digital age. Each of these trends will be considered in more detail below.

In contemporary art discourse, the term "Mixed Media" represents a complex artistic phenomenon, whose origins can be traced back to the Cubist era of the early 20th century [2]. It is believed that the media space surrounding modern individuals inevitably influences the transformation of artistic practices. In the context of painting, mixed media represents a revolutionary approach that overcomes the traditional limitations of artistic materials.

The concept of mixed media implies the integration of diverse materials and techniques, including both classical painting tools (pigments, bases, instruments) and non-traditional elements: industrial materials, natural objects, household items (glass, clay, chemical compounds, and others). In watercolour techniques, the application of mixed media principles expands the expressive possibilities of this art form.

A particularly significant aspect is the ability of mixed media to create a dialectical tension between authenticity and imitation in a painting [3]. In the context of watercolour painting, this approach allows artists to go beyond traditional techniques, enriching works with new textures, surfaces, and visual effects. The integration of various materials and techniques fosters the formation of a unique artistic language that significantly expands the expressive potential of watercolour works in both formal and conceptual aspects.

Today, the field of watercolour painting is experiencing a significant expansion in the range of materials used. Modern artists actively experiment with unconventional materials, among which the following innovative tools deserve special attention [4]:

- Propylene Light Texture Modelling Gel: A revolutionary material characterised by unique properties of translucency and plasticity. Its distinctive features include excellent adhesion and elasticity, setting it apart from traditional modelling compounds. The material enables the creation of relief textures without the risk of cracks or drips. By varying the thickness of the application, different transparency effects can be achieved. The gel exhibits high compatibility with watercolour pigments and other materials, opening up broad experimental possibilities. It allows for texturing both in its wet state using a palette knife and for mechanical processing after drying. When used in combination with watercolour, it enables effects characteristic of oil painting, proving particularly effective in creating landscape textures.
- Modelling Cream: A white water-based primer originally developed for oil painting but found applicable in watercolour techniques due to its specific properties: high viscosity, excellent adhesion, and quick drying without cracking. The material allows for the creation of multilayered effects when interacting with watercolour paints. The technique involves applying the material with a palette knife, followed by texturing and covering with watercolour after complete drying, ensuring the creation of both uniform and uneven pictorial surfaces.
- Texturing Materials of Natural Origin (Sand and Sandpaper): These materials are actively integrated into watercolour painting, being used for both background work and detailing key compositional elements. They enable the achievement of diverse textural effects that enrich the visual perception of a work.
- Propylene Structural Adhesive with Coarse Texture: A unique material containing microparticles that form crystal-like structures. Its distinctive feature is its ability to create a specific visual effect resembling a suede surface when viewed from a certain distance. When interacting with watercolour pigments after full curing, the material demonstrates characteristic heterogeneity, significantly different from the textural effects achieved using other modelling compounds. It allows for application in a significant layer, followed by relief formation using a palette knife.
- Coalescing Agent and Styrene-Acrylic Emulsion: These chemical components, when integrated into watercolour painting, exhibit a wide range of visual effects depending on their proportional ratio in the mixture. When interacting with watercolour pigments, they form a characteristic textured surface with controlled cracking, making this combination particularly effective for large-scale background elements and abstract compositions.

The application of these materials significantly enriches the technical arsenal of modern watercolor painting, allowing for unique textural and structural solutions that are unattainable using traditional techniques and materials. Regarding the transition of watercolor painting into the digital space, the following should be noted.

The digital transformation of watercolor painting represents a significant phenomenon in contemporary art, driven by both the technical limitations of traditional watercolor (irreversibility of the process, time consumption for creating sketches) and the new opportunities provided by digital technologies [5]. The integration of graphic software, digital cameras, and scanners into the creative process greatly expands an artist's toolkit, allowing for experimentation with composition, modifications, and reproduction of elements, which significantly optimizes the process of sketch creation and implementation of artistic concepts.

A notable trend is the complete transition of some artists to digital tools for creating watercolor artworks, which is widely applied in various fields, from easel painting to advertising, architecture, and animation. A striking example of the successful integration of digital technologies into watercolor practice is the work of British artist David Hockney, whose innovative pieces, created on an iPad with simulated watercolor techniques, were presented at the Royal Academy of Arts (2012) [6]. His experience demonstrates how digital technologies not only expand the expressive possibilities of traditional watercolor but also enrich the visual language of contemporary art as a whole.

Digital technologies have radically transformed the traditional perception of watercolor painting, extending it beyond the two-dimensional static image into a multidimensional interactive space. Modern 3D modeling software (3DMax, Maya, Lightwave) offers unprecedented possibilities for creating dynamic visual works with watercolor effects.

A fundamental distinction of digital watercolor from traditional techniques is its ability to exist in a virtual space, significantly expanding the possibilities of presentation and perception of artworks. The virtual environment enables the synthesis of visual, auditory, and kinetic perceptions, creating a multidimensional aesthetic space that transcends temporal and geographical boundaries. This format gained particular relevance during the COVID-19 pandemic when virtual exhibition spaces became the primary platform for showcasing artworks. Three-dimensional virtual galleries provide viewers with interactive engagement with artworks, including free navigation and scaling, ensuring a full-fledged exhibition experience comparable to traditional formats.

The integration of three-dimensional dynamic technologies has significantly expanded the scope of watercolor aesthetics, finding broad applications in cinema, television, advertising, animation, and the gaming industry. Modern computer technologies, including 3D modeling, material rendering, and animation, enable the transformation of static watercolor artworks into dynamic visual compositions, emphasizing the plastic and coloristic advantages of this technique. A notable example of the successful application of this approach was the presentation at the G20 Summit in Hangzhou (2016), where watercolor works by Gan Zhou were transformed into a dynamic three-dimensional composition featured in the promotional video "Chinese Style - G20" [7, 8]. This project demonstrated the potential of digital technologies in enhancing the artistic expressiveness of watercolor and presenting cultural heritage. Digital technologies not only reproduce but also amplify the characteristic properties of watercolor techniques—fluidity, transparency, texture, granulation, and diffusion—creating new forms of visual expressiveness through synthesis with other art forms. This opens unprecedented opportunities for the development of watercolor art in the digital age.

3. Results and Discussion

The transformation of watercolor painting into the digital space has led to radical changes in its perception, creation, and dissemination. Digital technologies have expanded the expressive possibilities of watercolor, eliminating many of the material limitations inherent in traditional techniques. Artists now have greater freedom to experiment, integrating multimedia elements and creating new aesthetic characteristics without the risk of irreversible mistakes. This shift has also contributed to the democratization of watercolor, elevating its status beyond a "minor" art form and allowing for its integration into various spheres of visual culture, including advertising, animation, and architecture.

The creative process has been fundamentally transformed as well, liberating artists from the technical constraints of traditional materials and enabling paperless creativity. The ability to easily edit and modify works, as well as integrate watercolor with other digital artistic techniques, has further optimized the artistic workflow. Additionally, the perception of watercolor paintings has evolved from static images to dynamic and interactive experiences. Virtual exhibition spaces and three-dimensional visualization have made artworks more accessible, overcoming spatial and temporal limitations. As a result, watercolor painting has not only expanded its possibilities but has also contributed to the emergence of a new aesthetic paradigm that merges classical traditions with modern technological advancements.

4. Conclusion

Regarding future prospects, we believe that further integration of digital technologies will foster the emergence of new hybrid forms of artistic expression, where traditional watercolor techniques will be combined with the possibilities of virtual and augmented reality. The development of innovative materials such as propylene gels and structural adhesives will open new possibilities for creating complex textural effects and expand the technical arsenal of artists. It is possible to predict the active development of the mixed-media direction in watercolor, where traditional and modern materials will be combined to create unique artistic solutions. The role of interactive and multimedia formats for presenting watercolor works will likely increase, leading to the formation of new forms of interaction between the viewer and the artwork. The development of virtual exhibition spaces and three-dimensional visualization technologies for watercolor works will gain particular importance. Additionally, further advancement in educational technologies related to watercolor painting, based on the synthesis of traditional methods and digital tools, can be expected. Overall, the future of watercolor painting appears to lie in the organic fusion of classical traditions with innovative technologies, allowing this art form to remain relevant and in demand in an ever-changing artistic environment.

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