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To Get Lost Willingly - A Study of Traditional and Digital Art Collaboration Through Extended Reality Technologies

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Abstract

In this study, the authors analyze the emerging phenomenon of collaboration between traditional and digital art forms, focusing in particular on how extended reality (XR) technologies are changing artistic expression and audience engagement. Using mixed methods, combining semi-structured interviews, experimental case studies, and audience response analysis, the authors examine the integration of traditional images with virtual reality experiences. The findings suggest that these hybrid art forms create multidimensional experiences that significantly increase audience engagement while expanding, rather than limiting, artistic intent. The authors present a theoretical framework for understanding these collaborative processes and discuss implications for artistic practice.

Keywords: Art, Digital Art, Synergie

1. Introduction

The boundaries between traditional and digital art forms are increasingly blurring as new technologies enable innovative forms of artistic expression and reception. This study

analyzes a specific case of using extended reality (XR) technology to transform traditional painitngs into immersive, interactive experiences. It's the collaboration project between traditional painter René Holm and new media artirst Rufus Rafał Pietrowicz within T.A.B project.

While previous research has analyzed digital art as a separate category, less attention has been paid to the collaborative processes between traditional artists and digital creators and how this collaboration can change our understanding of the artistic experience.

This research fills several gaps in the existing literature: the lack of integrated aesthetic theories that address both the traditional and digital dimensions of hybrid artworks; insufficient long-term research on audience engagement; limited research on the hybrid art production; and underdeveloped strategies for protecting artistic experiences dependent on evolving technologies.

2. Literature review

Research on traditional art reception has focused primarily on the visual perception of static objects in physical space (Belting, 2011; Elkins, 2010). With the development of digital technologies, scholars are increasingly investigating how digital tools are changing the production and reception of art (Kyomugisha A. T. (2025).

Grau (2003) introduced the concept of "osmotic interfaces," in which the boundaries between the viewer and the artwork become permeable, which is particularly relevant for understanding artistic experiences in augmented reality. Gupta, Nisha & Zieske (2024) applied a phenomenological approach to hybrid artistic experiences, suggesting that bodily engagement creates qualitatively different aesthetic experiences compared to traditional viewing.

Museums and cultural institutions are increasingly using XR technologies to enhance the visitor experience. Research by Bekele et al. (2018) has shown that XR tools have become key elements in the evolution of digital museology, these technologies can provide interactive and immersive experiences that traditional exhibitions cannot (Parker and Saker, 2020).

Recent research indicates that XR offers groundbreaking opportunities by creating multisensory environments that foster emotional connections between users and cultural content (Evans, 2019). These technologies simulate presence, which can lead to deeper emotional engagement with narratives and cultural artifacts.

Despite growing interest, significant theoretical gaps remain. Kenderdine (2021) pointed out the limited theoretical frameworks that comprehensively describe the touchpoints between traditional and digital art. Bucher (2018) and Lally (2018) highlighted unresolved ontological questions about where the "real" work of art is located—in the physical object, the digital extension, or the relationship between them.

Based on a review of the literature and preliminary observations, the authors propose the following hypothesis:

The joint integration of traditional art forms with augmented reality technologies creates hybrid experiences that increase audience engagement through multisensory immersion in the world of art, while expanding the expressive possibilities of traditional artists, resulting in the emergence of a new artistic paradigm rather than the replacement of traditional forms.

Pic.1 René Holm painting, preparation to exhibiton photo: Monika Klein

3. Research project

This study used a mixed approach, combining qualitative and quantitative data collection:

1.Case study analysis: detailed documentation and analysis of the collaboration between René Holm and Rufus, in which traditional paintings were transformed into VR experiences.

2. Semi-structured interviews: in-depth interviews with traditional artists, digital creators, curators, and art managers involved in hybrid art projects.

3. Audience response research: Collection of qualitative data on audience engagement with both traditional artworks and their XR extensions.

4. Interdisciplinary team observation: Ethnographic observation of collaboration processes between traditional artists and digital creators.

The research was conducted during a design sprint in Vilnius, Lithuania in Aprol 2025, providing a concentrated environment for artist-technologist collaboration and immediate reflection on the experience. From a larger cohort of 40 design sprint participants representing diverse fields (including traditional artists, digital artists, developers, curators, and cultural managers), we purposively selected 25 participants for in-depth interviews. The study involved 25 participants: 8 traditional artists, 7 digital artists/programmers, 5 curators/art managers, and 5 audience experience designers. Participants were selected using purposive sampling to ensure relevant knowledge and experience in hybrid art production. Interviews were recorded, transcribed, and analyzed using thematic analysis techniques. Audience response data included qualitative feedback (post-experience interviews, reflection journals). Observations by interdisciplinary teams were documented in field notes and analyzed for patterns of communication, decision-making, and creative processes.

4. Results

Our results indicate that XR technologies facilitate a fundamental rethinking of how art is experienced. XR transform the artistic experience, traditional images are no longer static objects for passive viewing, but become portals to immersive, interactive experiences. As one expert noted:

E1: "*The integration of AR, VR, or other technologies serves to expand multisensory engagement. It's about engaging all the senses*."

E2:"Perception is not limited to the eye, but becomes a kinesthetic, interactive, sound and sensory experience."

Pic.2 René Holm expieriences his universe in XR by Rufus, Pic. 3 and Pic. 4 Monitor with XR image by Rufus , photos: Monika Klein

The René Holm/Rufus case study illustrates this shift, transforming viewing from passive observation to active exploration. Light has become both a tool and a symbol, allowing users to explore and interact with images from within, creating what Grau (2003) calls "osmotic interfaces."

The main tension identified in the study was the balance between preserving artistic intent and exploiting new technological possibilities. We tried to understand artistic intention and technological possibilities. The René Holm/Rufus project clearly identified this balance as a key issue, citing both "*remaining faithful to René's tone and message*" and "*creating new ideas*" as parallel concerns.

Holm clearly separates the **original** from the virtual, yet sees synergy:

"It's just a different form of presence, inside the work... not competing with the original."

However, our findings suggest that when artists themselves participate in the adaptation process, the result is not a compromise but a genuine extension of their artistic vision. As René Holm noted in relation to the possibility of viewers "entering" his paintings:

"*I feel that it gives me as an artist and my work an extra life, because I gain perhaps a new audience, a new opportunity to participate in other exhibitions."*

Rufus sees it as an **opportunity to test new boundaries**: "*This experiment was about opening the image... not only by looking, but also by moving, listening, and physically reacting.*"

Audience response studies have shown significantly higher levels of engagement with hybrid art forms compared to traditional viewing experiences.

Key findings include:

• Increased time spent engaging with artworks (an average of 5 minutes for XR experiences compared to 2.3 minutes for traditional viewing)

• Higher levels of emotional connection to the artwork reported by viewers themselves (average rating of 4.2/5 for XR experiences compared to 3.1/5 for traditional viewing), and better recall of artistic details and themes in post-experience interviews.

E3: *"It is such a meeting with art, which engages more than one sense and triggers the feeling of physical presence."*

E4: "*Our contact with the image becomes more and more intermediate and less and less physical*."

These results are consistent with Evans' (2019) research, which suggests that sensory stimuli such as images, sounds, and narratives help to trigger mental activity and emotions in the user, mimicking a state of immersion.

Summary Table

Theme	**Digital Artist**	**Traditional Artist**
Philosophy	Tech deepens real-world connection	Art gains "extra life" through new formats
Medium Use	AI, XR, Godot—interactive, immersive	Painting—physical, tangible,
Collaboration	Experimental, body-centric interaction design	Flexible, trust-based openness to reinterpretation
Audience	Sensorial, immersive connection	Global accessibility, especially for younger generations
Innovation Stance	Technological frontier	Strategic pragmatism and curiosity

Source: own compilation

5. Theoretical Implications

This research contributes to the development of integrated aesthetic theories that address both traditional and digital dimensions of hybrid artworks. Author propose a "Hybrid Art Continuum" framework that conceptualizes artistic experiences along multiple dimensions:

- physical-virtual presence,
- passive-active engagement,

- and single-multi sensory stimulation.

Findings challenge binary distinctions between traditional and digital art, suggesting instead that hybrid forms represent a new paradigm altogether—one that honors artistic tradition while embracing expanded technological possibilities.

Practical Implications

For artists and arts organizations, our research suggests several practical implications:

1. **Exhibition design**: Cultural institutions should consider how physical spaces can serve as anchors for virtual experiences, creating seamless transitions between traditional and digital engagement.

2. **Skills development**: Artists and arts managers need new competencies spanning traditional artistic techniques and digital production methodologies.

3. **Distribution models**: Hybrid art forms enable new distribution channels, such as René Holm's observation that virtual artworks could be "*sent on an email to anywhere in the world.*"

4. **Audience development**: XR extensions of traditional art can attract new audiences, particularly younger generations more accustomed to digital experiences.

Pic.5. Rufus in the VR exhibition, photo: Agata Grzybowska

6. Limitations and Future Research

This study has several limitations. First, the case studies focused primarily on painting-to-VR transformations, and findings may not generalize to other art forms. Second, longitudinal data on sustained engagement with hybrid art forms remains limited.

Future research should explore sustainable economic models for hybrid art production, develop standardized evaluation frameworks, address accessibility considerations for diverse audiences, and investigate preservation strategies for experiences dependent on rapidly evolving technologies.

7. Conclusion

The integration of XR technologies with traditional art forms represents not merely a technological innovation but a fundamental shift in artistic practice, exhibition, and reception. By allowing viewers to "step inside" traditional artworks, these technologies create new dimensions of experience that can deepen engagement and reach new audiences.

Our findings suggest that successful collaboration between traditional and digital art forms depends on several key factors: artist openness to technological extension of their work, technical expertise that respects artistic intent, careful consideration of physical spaces as anchors for virtual experiences, and user-centered design approaches.

As one participant aptly summarized the potential of XR to transform traditional art: "*It's not only these boring paintings in a boring museum"* but an opportunity to create deeply engaging experiences that can connect with contemporary audiences while preserving artistic intent.

Pic.6 She disappears into meadow René Holm photo: RedStar

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