# TRANSFORMATION OF VISUAL THINKING AND COGNITIVE STYLES IN AN INTERACTIVE DIGITAL ENVIRONMENT

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**Abstract:** This article analyzes the evolution of psychological perception mechanisms within the context of digital art. It examines the transition from traditional contemplation to interactive engagement and investigates changes in the cognitive styles of the modern viewer. The author focuses on the phenomena of immersion, sensory overload, and the formation of new visual thinking patterns within high-tech interfaces.

**Keywords:** digital art, cognitive aesthetics, visual thinking, interactivity, immersion, human-computer interaction, cognitive adaptation

The rapid development of digital technologies has led to the emergence of new artistic forms that fundamentally transform the relationship between the artwork and the viewer. Modern digital art is no longer limited to static representation; it functions as a dynamic system encompassing animation, algorithmic structures, and virtual reality.

From a psychological perspective, this necessitates a revision of the mechanisms underlying artistic image formation. Unlike traditional painting, a digital object often lacks physical materiality and exists in an environment mediated by interfaces and software. Consequently, perception shifts from passive contemplation of an object to active interaction with a process, which inevitably affects attention, emotional response, and interpretative strategies.

Theoretical Foundations and the "Paradox of Authenticity"

A central problem in the psychology of digital art is the so-called "paradox of authenticity." The human brain is historically conditioned to associate aesthetic value with the physical presence of an object and the "artist's trace." In the digital realm, this trace is hidden behind layers of code and algorithms, creating a specific cognitive barrier.

However, this barrier is overcome through a high degree of cognitive immersion. When a viewer interacts with an NFT installation or a VR gallery, the boundaries between the physical "Self" and the digital representation begin to blur. This specific relationship between the observer and the interface determines the depth of the emotional experience, making it unique for each subject.

Transformation of Cognitive Styles and Visual Literacy

Prolonged exposure to the digital environment inevitably restructures our thinking. Traditional linear perception (typical of reading books or studying classical canvases) is giving way to new forms:

- Fragmentarity and Simultaneity: The modern viewer becomes accustomed to perceiving heterogeneous information streams simultaneously (text, sound, moving images).
- Active Agency: Perception of digital art is now closer to problem-solving models than to simple observation. The viewer constructs meaning through navigation, choice, and feedback.
- Embodied Cognition: Physical gestures (clicks, movements in space) become an integral part of the process of meaning interpretation.

Psychophysiological Challenges and Overload Risks

Despite expanding creative horizons, the digital environment places a significant load on the nervous system. The dynamism of media, infinite scrolling, and the use of generative AI can lead to "sensory overload."

In the process of aesthetically evaluating a digital object, the brain is forced to utilize additional resources:

1. Selective Attention to filter out light effects and interface noise.
2. Pattern Recognition within complex multimedia compositions.
3. Adaptation to Temporal Variability, as many works lack a fixed form and unfold over time.

Emotional Modalities and Immersion in Virtual Environments

Digital art introduces new emotional modalities through immersion and interactivity. Psychological analysis shows that the use of complex sound design, dynamic animation, and responsive environments creates conditions for multisensory stimulation, which significantly intensifies the viewer's emotional involvement.

Within the framework of cognitive aesthetics, this leads to specific states:

- Sense of Presence: The psychological effect of being in a simulated space where the brain perceives virtual stimuli as real objects.
- Interactive Empathy: Increased levels of compassion through non-linear narrative structures where the viewer's choices affect the fate of digital characters.
- Hybrid States: A combination of curiosity, a sense of control over the process, and cognitive tension arising from the unpredictability of the outcome.

International Context and Digital Well-being Standards

The issue of psychological well-being in digital spaces has been discussed internationally for many years. Examples include the experience of Finland, a pioneer in integrating digital literacy into the social structure. It is recognized that the quality of digital interaction directly affects the mental health of citizens. In the context of Uzbekistan, these issues are also gaining legal and psychological significance, reflected in legislative acts regulating the protection of digital product consumers.

Conclusion

The psychological aspects of perceiving digital art are inextricably linked to the technological medium. Beyond the visual experience, complex moral and ethical relationships develop between the creator and the audience, based on trust in the medium and adherence to the "rules of the game" of virtual space. The transformation of visual thinking toward fragmentarity and simultaneity signals a profound evolution of cognitive styles in modern society.

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