

Artistic Virtual Environments, Aesthetics and Experiences

This special issue of *Intelligent Agent* presents six essays that explore the aesthetics connected with virtual environments created and presented as works of art, works about art, or related genres. The essays primarily focus on the aesthetic experience for participants (AKA, the aesthetic experience), aesthetic analysis, content, emotional content, emotional experiences, and the unique, if any, qualities of the medium.

Two of the essays address emotion both as part of the experience for the participant and as part of the content of the artistic virtual environment (AVE). In "The Aesthetic Experience, Emotion and an Artistic Virtual Environment," Dena Eber, Greg Little, and Brian Betz explore the aesthetic experience for participants interacting with artistic virtual environments (AVEs). Where other authors muse about the effect of different theories on the aesthetic, this paper presents a formal study that measures the experience using the emotional response of participants. The response, if emotional, also gauges the perceived emotional content of the AVE. The authors examine if this kind of content coupled with the immersive qualities of the AVE facilitates a rich aesthetic experience and thus a high feeling of presence for the participant.

Emotion is a crucial component of Josephine Anstey's "Agents in Love. On the Construction and Use of Emotional Characters in VR," in which she discusses her approach to interactive drama that provides an "emotional terrain" for the participants to discover. Her stated goal is to put the participant in the role of the primary character in a drama, one that unfolds through participation. Thus, the participation is meant to bring forth an emotional response. She states that this response is best elicited by employing two key components, the application of dramatic tools for narrative media to immersive virtual environments and the use of artificial intelligent agent-actors that guide participants. Not only does this essay focus on the emotional reaction of the human actor, but it does so from a theoretical base developed for film and story. Anstey applies ideas similar to Alfred Hitchcock's psychological approach to a scripting process in which the theme centers on anxiety and emotional tension. The participant experiences an "emotional rollercoaster" and acts as a peer to the other actor-agents in the drama, thus becoming a co-creator of the story. The drama incorporates scenes that serve to provide structure to the story, but also allow interaction. The actor-agents subtly guide the participant through choices in the narra-

tive and stimulate emotional responses from the participant in an indirect way.

A number of other works use film, theater, and story as a theoretical frame to reflect on the aesthetic content and experience of AVEs. In "Cognitive Schemas and Virtual Reality," Alison McMahan and Warren Buckland argue how cognitive-semiotic theories from film can be applied to virtual environments. In particular, they look at how a viewer understands spatial orientation within the context of a film. They discuss Buckland's *Imagined Observer Hypothesis*, which articulates the idea that the viewer needs to feel that they are "inside the fiction" in order to respond emotionally. In VR, participants use a similar notion to orient themselves. The authors present a number of cognitive schema theories that explain corporeal understanding in virtual environments such as *kinesthetic image schemas*, which says that perceptions are based on experience from bodily sensory-motor inputs. The authors use another theory, the *container schema*, to draw a parallel between body awareness and immersive VEs such as the CAVE. They ultimately present the groundwork for further research into whether or not these ideas are indeed a model for the aesthetic experience for participants in an AVE.

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Film and theater also inform Magy Seif El-Nasr's essay "Applying Principles from Performance Arts for an Interactive Aesthetic Experience." El-Nasr suggests that heightening tension and drama intensify involvement and engagement for participants in a VE. The author uses acting and screenwriting theories to put forth new methods for creating VEs, including a multi-agent interactive drama approach. These are meant to increase the dramatic effect for the participant, thus initiating a richer experience.

The final two essays deal predominantly with aesthetic analysis connected with the aesthetic experience in AVEs. In "Building a Bridge to the Aesthetic Experience: Artistic Virtual Environments and Other Interactive Digital Art," Toby Crocket proposes *the aesthetics of play and empathy*, a new criterion for understanding artistic virtual environments, especially in light of their novelty. The empathy component is grounded in the awareness that the participant is not totally certain which avatar represents her, thus melding her into a group identity and forging an opportunity for empathy.

The play element includes the impression one gets from author chats, or a series of CyberForums in which the authorship is de-centralized and a form of controlled chaos emerges. This is a kind of playfulness that encompasses discovery and encourages pleasure and a kind of *flow* for the participant. Taken together, play and empathy provide a framework for considering the aesthetics of virtual environments as an art form.

In "Considerations of the Corporeal: Moving from the Sensorial to the Social Body in Virtual Aesthetic Experience," Juliet Davis highlights the often overlooked qualitative differences between physical sensations in real life and those of a virtual space. Among other theories, she mentions Francisco Varela's "The

Reenchantment of the Concrete" in which he argues that cognition is grounded in embodied experience. She then presents Diane Gromala's artwork *The MeatBook*, which is grounded in Varela's theory. Davis mentions a number of other artists and theorists who ultimately move the discussion into the social and cultural realm. Thus, she suggests that in exploring an aesthetic experience with this kind of media, we need to consider "the nature of corporeality and materiality in lived interaction," which goes beyond experiences such as perception and cognition.

This series of essays sheds interesting perspectives on how to negotiate, understand, and ground some of the emerging components of AVEs, especially the aesthetic experience for the participant. It is clear that other time-based media, such as theater, film, and narrative, provide the springboard for appreciating this art form. While some theorists look to cognitive groundings, others seek to redefine that frame and put forth a new classification. All but one of the writings are theoretical, which identifies the need to further research the experience that participants have with the VE art form. Perhaps this grouping of manuscripts will prompt further exploration and help provide fodder for further inquiry.

