

Chapter 7

Creating Emotions Through Digital Media Art: Building Empathy in Immersive Environments

Paulo Veloso Gomes

 <https://orcid.org/0000-0002-3975-2395>

LABRP, School of Health-Polytechnic of Porto (UP), Portugal

Vítor J. Sá

 <https://orcid.org/0000-0002-4982-4444>

Portuguese Catholic University (UCP), Portugal

António Marques

 <https://orcid.org/0000-0002-8656-5023>

LABRP, School of Health-Polytechnic of Porto (UP), Portugal

João Donga

 <https://orcid.org/0000-0002-8701-2113>

LABRP, School of Health-Polytechnic of Porto (UP) Portugal

António Correia

LABRP, School of Health-Polytechnic of Porto (UP), Portugal

Javier Pereira Loureiro

 <https://orcid.org/0000-0001-9328-0723>

CITIC, University of Coruña, Spain

ABSTRACT

Art has a power different from all other human actions; it can produce a variety of human emotions like nothing else. The main purpose of this chapter is to study the

DOI: 10.4018/978-1-7998-3669-8.ch007

relation between media arts and emotions. Virtual environments are increasingly being used by artists; the use of immersive environments allows the media art artist to go further than express himself, allows that through contemplation and interaction the participant also becomes part of the artistic artefact. Immersive environments can induce emotional changes capable of generating states of empathy. Considering an immersive environment as a socio-technical system, where human and non-human elements interact, establishing strong relationships, the authors used actor-network theory as an approach to design an immersive artifact of digital media art. The use of neurofeedback mechanisms during the participant's exposure to immersive environments opens doors to new types of interaction, allowing to explore emotional states to generate empathy.

INTRODUCTION

Art has a unique power, it is the most powerful of human endeavors, it produces a variety of human emotions (Neal, 2013). Emotions are one of the most influential factors to the human mental life. When someone is facing a work of art, feels something. Emotions are a psychological experiment that stimulates the human being. Other than the traditional art, the Media Art involve the audiences in the art works process. With media art, the work of art is no longer just an element of contemplation, the public has become part of it. The concept of immersiveness connects the participant and the artwork, transforming them into a single element (Lee & Hyung, 2014).

This chapter addresses the use of an immersive media art artifact that captures the participant's emotional states to generate empathy. In the first section, this work highlights and relates the role of emotions with media art, addressing the concept of affective computing that results from the combination of different areas of knowledge. Then, a reflection is made about the importance of emotions in the construction of empathy and how the simulated physical acts can influence emotional states and induce empathy.

In the third section Actor-Network Theory concepts were applied as a theoretical and methodological framework in the analysis and design of an immersive artifact of digital media art, the e-EMotion-Capsule.

The next section describes the multidimensional immersive media art artefact based on different interaction experiences that create emotions capable of generating states of empathy. This media art artefact uses three types of immersive environments:

17 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the product's webpage:

www.igi-global.com/chapter/creating-emotions-through-digital-media-art/260024?camid=4v1

This title is available in Advances in Media, Entertainment, and the Arts, InfoSci-Books, Communications, Social Science, and Healthcare, InfoSci-Media and Communications, InfoSci-Social Sciences and Humanities, InfoSci-Social Sciences Knowledge Solutions – Books, InfoSci-Select. Recommend this product to your librarian:

www.igi-global.com/e-resources/library-recommendation/?id=126

Related Content

Correlation-Based Ranking for Large-Scale Video Concept Retrieval

Lin Lin and Mei-Ling Shyu (2010). *International Journal of Multimedia Data Engineering and Management* (pp. 60-74).

www.igi-global.com/article/correlation-based-ranking-large-scale/49150?camid=4v1a

Design and Implementation of Trust Enabling Functions

Jeanette Lemmergaard, Damien Brigh, Christopher Gersbo-Møller and Tim Hansson (2008). *Handbook of Research on Digital Information Technologies: Innovations, Methods, and Ethical Issues* (pp. 418-437).

www.igi-global.com/chapter/design-implementation-trust-enabling-functions/19857?camid=4v1a

Spatio-Temporal Analysis for Human Action Detection and Recognition in Uncontrolled Environments

Dianting Liu, Yilin Yan, Mei-Ling Shyu, Guiru Zhao and Min Chen (2015).

International Journal of Multimedia Data Engineering and Management (pp. 1-18).

www.igi-global.com/article/spatio-temporal-analysis-for-human-action-detection-and-recognition-in-uncontrolled-environments/124242?camid=4v1a

Perceptual Multimedia: A Cognitive Style Perspective

Gheorghita Ghinea and Sherry Y. Chen (2006). *Digital Multimedia Perception and Design* (pp. 187-205).

www.igi-global.com/chapter/perceptual-multimedia-cognitive-style-perspective/8428?camid=4v1a