



Instantiating the creation process in digital art for serious games design

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ABSTRACT

The creation process in digital art relies often on collaborations between an artist (or group of artists) and a multidisciplinary team. This collaboration implies a multidisciplinary work involving art, science, technology, design, psychology, etc. that come together by sharing a common communicational and informational space.

In this essay we bring into discussion how the creation process cycle in digital art could be instantiated and applied for the development of serious games through end-user purposes of both creative authors: the digital artists and the serious games developers. We realise a comprehensive analysis of this creation process in digital art, specially the aesthetic musing activity, while devising how it could be helpful to introduce new engaging stimulus in the creative process of serious games.

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1. Introduction

The process behind the act of the art creation or the creation process has been the subject of much debate and research during the last 50 years at least, even thinking art and beauty has been a subject of analysis already by the ancient Greeks such were Plato or Aristotle. Duchamp in his lecture “The Creative Act” [1] states the artist is never alone with his/her artwork; there is always the spectator that later on will react critically to the work of art. If the artist succeeds in transmitting his/her intentions in terms of a message, emotion or feeling to the spectator then a form of aesthetic osmosis actually takes place through the inert matter (the medium) that enabled this communication or interaction phenomenon to occur. The role of the spectator may become gradually more active by interacting with the artwork itself possibly changing or becoming a part of it [2–4].

Indeed, the creation process in digital art, taking here in a broad way embracing all kind of computer or electronic art, relies often on collaborations between an artist (or group of artists) and a multidisciplinary team of programmers, technicians, engineers, scientists and designers, among others. This collaboration implies a multidisciplinary work involving art, science, technology, design, psychology, etc. that come together by sharing a common commu-

nicational and informational space. Due to the widespread of the digitally coded information content that is increasingly available in high expressive multimedia formats, the creation process is becoming more and more based on the manipulation and integration of digital content for the creation of artworks [5].

The creation process in digital art is mainly based on the design of the artifact’s message and its development. The computer medium in the form of editing, communication and collaboration tools as well as digitally coded information content is likely to be always present and traversing the overall creation process. The meaning of design in this context, appoints to a conscious effort to create something that is both functional and aesthetically pleasing. Design is here taken from both the perspective of design in engineering and from a more inventive view as it is the case in applied arts [6,7]. However, unlike in the pure design process, where the problem-solving guides the action of the designer, in digital art such systematic manner appears not primarily to solve a problem but to enhance the intention to the realization, i.e., the final artefact.

Generally, artists follow a similar process in developing their creative ideas, thought they may be less conscious of the process they are following. Initially the artist will tend to experiment in a rather random manner, collecting ideas and skills through reading or experimentation. Gradually a particular issue or question will become the focus of the experimentation and concrete implementation, formulating alternative ways, trying them, in order to adopt a refined one that will be pursued through repeated experimentation. Thus the design process itself evolves from a vision or idea/concept (even if it is not aware for the creator) until the final digital

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artefact is released. The message the spectator can obtain from the artefact in terms of a personal or group experience is the central issue the digital artefact holds [8,9].

In this essay we bring into the discussion how this creation process cycle in digital art could be instantiated and applied for the development of serious games though end-user purposes of both creative authors – the digital artists and the serious games developers – differ in terms of the final end-user objective of their targeting outcomes. Serious games' developers concentrate in the digital story, the excitement of their final work on side of the end-user and their related functionalities to achieve it. Aspects such as easy-to-learn features, great end-user satisfactoriness are important (and pivotal). Digital artists are most of the time focused on their own satisfaction as creative persons while only secondly taking into consideration their artwork acceptance throughout a certain public. However, more and more digital artist have also to take into account, very seriously, in their creative work the end-user dimensions if they want to succeed as artists. As mentioned before, the creation process tends to focus in the message or experience the spectator (end-user) might be able to perceive/experiment when manipulating/acting with the final artwork [10,11]. This is somehow similar to what is anticipated/expected with a serious game. How can the models, principles, strategies and technologies, as also, best practices of both areas be merged or explored jointly? We ought in this article to analyse the intrinsic design/development process of both areas and devise a common framework for creative artefacts being these digital artworks, serious games or any other object resulting from a creation process (e.g. graphic design).

This essay is organized in the following sections: first we describe the creation process in the digital art as we perceive and apply it from the message design and technological development point of views. Then we describe the traditional development cycle of serious games. In Section 4 we describe a vision for a common framework for creative development in digital art and serious games which is mainly based on exploring the aesthetic musing activity. Finally we draw out some conclusions.

2. The creation process in digital art

The creation process relies mostly on creative design process with several phases starting from the first concept until the final artefact is released into exhibition.

As depicted in Fig. 1 the creative design process is launched when the artist gets hold with an initial idea/concept. This process is not a linear process, i.e., artists may go back and further in the activity sequence, skipping one or focusing the work in another. The process is usually highly dynamic, yet, the artist's vision is always present [12].

There are different phases of the creation process each one covering an important aspect of the formation of the final artefact. These different phases are described in following: Message design phase:

- Concept design: In this activity the artist gets involved in converting his/her idea/concept or vision into a set of sketches, informal drawings, i.e., the abstraction is concretized in a perceptive structure. The artist does exploratory drawings that are not intended as a finished work. The outcomes of this activity are, thus, sketches, drawings that allow the artist to try out different ideas and establish a first attempt for a more complex composition.
- Narrative design: Here the artist takes the drawings resulting from the concept design activity and designs a composition, a construct of a sequence of events that set up the message that will allow the users/viewers an emotional connection which grants memories and recounting of the artwork. The narrative

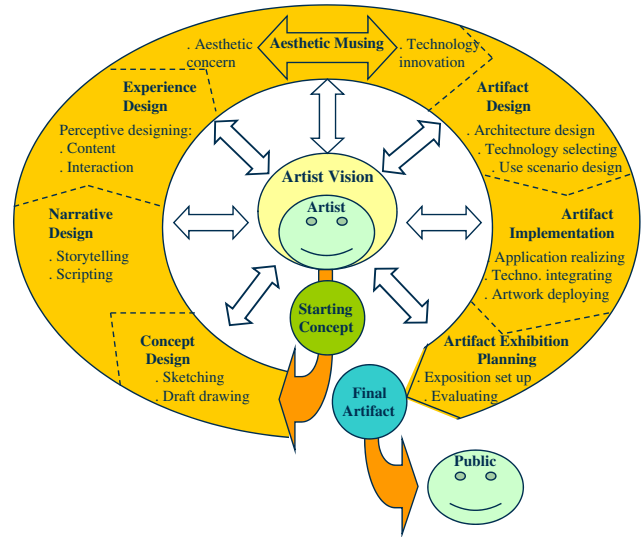


Fig. 1. Overview of the different phases of the creation (or creative design) process in digital art.

of the message behind the initial concept is designed taking into consideration aspects such as the structure of its constituent parts and their function(s) and relationships. The narrative assumes the form of a chronological sequence of themes, motives and plot lines. The outcome of this activity can be resumed as the design of the message as a story.

- Experience design: This activity embraces the process of designing the message, taking into account its related concept and narrative, to design and conceptualize specific characteristics of each narrative event from the point of view of the human experience it shall provide. This design or planning of the human experience is made based on the consideration of an individual's or group's needs, desires, beliefs, knowledge, skills, experiences, and perceptions. The experience design attempts to draw from many sources including cognitive and perceptual psychology, cognitive science, environmental design, haptics, information content design, interaction design, heuristics, and design thinking, among others.

Aesthetic musing: This is a central activity in the creative design process, it represents the moments of contemplation where the artist revise his/her vision against the decisions made (to be done) (see Fig. 2) during the design and development of the artefact. We identify two guiding vectors in aesthetic musing of artefacts.

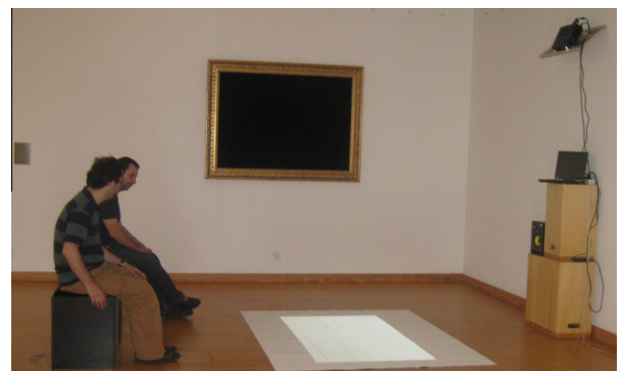


Fig. 2. Digital artists during creative development (artefact: "Gato, o novo flâneur" by Raquel Pinto & Filipe Leite) (Courtesy of the Master Course in Technology and Digital Art of the University of Minho, Portugal).

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