Chapter 11
Playing with Design:
The Universality of Design in Game Development

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ABSTRACT

In recent years, digital games had the capacity to join a vast set of knowledge fields that provided them the status of one of the areas that has most contributed to the development of contemporary theory of new technologies and also to the development of new imagetic solutions, especially in tri-dimensional representation (3D). Digital games were the motto in the research of artificial intelligence, physical and virtual interfaces, the relationship between man and machine, virtual representation, and development in the field of digital animation. In this context, the aim of the authors' proposal is to show the need and universality of design in the development of digital games, at the level of amusement games and, mainly, in serious games. Since the authors consider design as a project and understand design as an essential tool in the development of the project, they will dwell on the amplitude of design and designer in multidisciplinary teams of game creation. The following "4 Ds" will be studied and explained in detail: design of games, design of characters and virtual scenography, "design" of emotions, and design of the interface.

INTRODUCTION

"If interactivity can be located as a term that is more than its links and networks of communication and exchange, and be seen as something that is more about producing particular systems of knowledge, then the process happens through the formation of the digital subject." Fuery, Kelli (Fuery, 2009)

Since its first appearance at the end of the 1970s, computer games have brought a computer culture

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(Turkle, 1995) to daily life of common citizens, included in a contemporary concept larger than Darlew (2000) named "digital visual culture"(Darley, 2000), where new signalings, rules and styles of virtual communication have become a constant.

In front of a computer, the world of games has promoted what Cadoz (1994) names as "immersion in the image" (Cadoz, 1994), teaching us about the action free of physical reality limitations (Cadoz, 1994). In this context, objects that do not exist, fly, spin, jump, speed up, change form and color, explode, disappear, appear again and are manipulated and stimulated by us.

At the basis of this cultural evolution there is a numerical calculation formula called computer code that according to Babbage (Manovich, 2001) represents, at last, a culture that was built with the use of computers (Postman, 1993).

"In fact, this can be seen as a culminant point of a cultural process that has begun approximately 3500 years ago, with the invention of the Greek alphabet". (Cruz, 2009)

The behavior of computer games, like the behavior of any other application created by a computer program, is only limited by the imagination of its programmer and of the artist, and thus, it is possible to assume that the first artists of computation art, in the 60s, were programmers.

"There was no other alternative. Each work, whether it was graphical, animation or music, was the result f a unique and inevitable act of writing of a computational code (...) So, it is not surprising that the debate related to the relationship between art and technique is sometimes considered in a very incisive way, and raises the question whether programmers and engineers are not in fact the real creators in the context of digital culture". (Cruz, 2009)

If at an initial stage, this relationship between programmer and artist, is surpassed by technological development and graphical computing promoted by the industry of the "spectacular and the attraction" (Cubbit, 2007), it has then forced an increasing distance between the artist and the programmer, with the inclusion of other characters in the process of the project development, such as characters designer, digital artist, project designer, etc, promoting the multidisciplinarity of game creation teams.

The technology of digital and of the creation of specialized computer programs has quickly enabled artists to move in the much desired direction of the automation of production process, in a perspective of the trivialization of image and the demystification of the artistic object that Benjamim (Benjamin, 1992) calls an act that "devaluates the here and now". This perspective is taken into extremes, since all digital information (popularized by lexicons such "dot jpg", or "dot avi") can be shared, duplicated in virtual environments, thanks to platforms such as the Internet, *Facebook,* or electronic mail.

Thus, objects of a game such as "Tetris" (1984) originally created by Alexey Pajitnov, Dmitry Pavlovsky and Vadim Gerasimov, are, first of all, made of information, and not made of metal or wood. They are computational representations of *tetraminos*, that besides its descending movement does not obey gravity laws, unless this is the intention of one of the programmers. Heroes at Nintendo worlds can make giant jumps and explode the opponents with their "weight", without suffering any damage. The "digital native"(Prensky, 2001), and even the digital immigrant"(Prensky, 2001), quickly find out that this computer game is based in the repetition and learning of a new reality. Games like "Tetris" *take players into "micro-worlds*" (Turkle, 1995) of computer where rules are clear and unequivocal. Knowing a game demands that it is decipherable, and that it is possible to understand the aim of its creator, and that it enables an intellectual communion with the program, and an emotional bond with the characters and dynamic environments. When the rules and the interactive