Chapter 13
Interprocedurality: Procedural Intertextuality in Digital Games

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ABSTRACT

Intertextuality is present in most digital games since their beginnings. However, despite its importance for understanding games, research about the theme tends to be disproportionally rare and limited to representational aspects (text, images, audio, etc.), leaving out games’ most distinctive characteristics, namely, their rules and mechanics. Since the classic concept of intertextuality does not account for this dimension, the authors propose a concept that is to games what intertextuality is for texts, combining principles of intertextuality with the theory of procedural rhetoric, which deals with the construction of meaning in digital games. This concept, interprocedurality, describes the explicit or implicit inclusion of other games’ rules and mechanics in a given game. As a way to exemplify its presence in a specific game, this chapter presents a brief analysis of the interprocedurality occurring in the digital game Deus Ex: Human Revolution and the findings it generated.

INTRODUCTION

Digital games seem particularly related to intertextuality. Since their early beginnings, games have been incorporating themes, structures and other elements from previous media like literature, comics and movies. The creator of Spacewar! (1962), for example, clearly identifies Buck Rogers novels and comics as inspiration for the ship’s design in his game, while Galaxy Game (1971) and Computer Space (1971) were both based on spaceship travel and combat as depicted in many science fiction books (Kent, 2001). Science fiction was not the only influence in digital games, though. Fantasy also was a frequent source

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of references and inspiration to games. *Colossal Cave Adventure* (1976), Atari 2600’s *Adventure* (1979), *Dungeons* (1975), *Telengard* (1976), and *Zork* (1976), had magic, dragons and castles, assumedly taking inspiration from the pen and paper role-playing game *Dungeons & Dragons* (Jerz, 2007).

At first, this probably occurred due their technical limitations, since labeling an enemy as “alien” was an economic way to tap into a rich tradition of science fiction invasion stories, quickly giving players some narrative context about the crude pixels on the screen. Resorting to stereotypes made the apprehension of the new media by the public easier and at the same time, functioned as narrative shortcuts, saving computational resources from the duty of explaining the narrative for the players, in a similar fashion that genre-based authors make conscious use of intertextuality in order to weave complex narratives without having to include long explanations (Kaveney, 2005).

With the advancement of computers, games could store more information, present richer graphics and run complex simulations. *Star Wars*, *Ghostbusters* and other movies became games, even unofficially, as is the case of *Metal Gear Solid* taking many narrative elements from the movie *Escape from New York* (Good, 2015). Now, the links with other texts could be both more frequent and more sophisticated, creating a constant interplay between games and previous media.

However, intertextuality was never a frequent research theme in Game Studies. An inquiry on intertextuality in a number of journals related to Game Studies generates few results, revealing a field of research in need of more attention. Moreover, even the existing studies about intertextuality in digital games usually limit their analysis to games’ text, sounds and images (referred in this chapter as representation elements). While this has generated very interesting work, it does not adequately address the peculiarities of digital games. Besides representation elements, games have rules that structure their operations and are codified in procedures processed by a computer. This systemic dimension is also expressive in itself, conveying meaning through processes and algorithms. Moreover, games often copy, change and twist mechanics and rules of previous games. The authors argue that such phenomenon is very similar to intertextuality and, in this sense, looking at such rules and mechanics “migration” could be a useful way to complement intertextual approaches for understanding games.

Therefore, this chapter’s objective is to discuss the intertextuality of rules and mechanics in digital games and its relations with the game’s representational content. To do this, the authors present a brief overview of intertextuality and combine the concept with procedural rhetoric theory in order to apply it to game rules. Then, a brief analysis of the digital game *Deus Ex: Human Revolution* exemplifies the use of the concept, followed by conclusions. In addition, since the procedural elements of a game underlie the concept, the word intertextuality seems too tied with text. Therefore, for referring to intertextuality detected in the rules and mechanics of a game and not in its representation content, the authors propose the term *interprocedurality*, which will be used hereafter.

This chapter develops some findings cited in previous works. When analyzing the game *Passage*, by indie developer Jason Rohrer, the authors described how the game’s creator used visual and thematic references to convey a deeper message through the few rules and assets of the game (Vasconcellos & Araujo, 2013). In another work, the authors described how operational aspects of game interface (like the almost universal use of the W, A, S and D keys to control the avatar) could be understood as an example of intertextuality (Carvalho, Vasconcellos, Ferreira, & Araujo, 2013). In both cases, however, the scope of said texts did not allow for a full description of the concept.

In this chapter, the authors present an initial outline of interprocedurality, but it is important to emphasize that this work focuses on the production domain. Constraints of time and space do not allow for a full account of interprocedurality as perceived by the audiences of a game. The authors’ concern