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# Games | Game Design | Game Studies

## An Introduction

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[transcript]

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# Contents

Chatfield clearly speaks of digital games as they have come into being since the hyperrealistic turn. This last evolutionary jump—the transition to a realism, which appears photographic but does not correspond to any index—led games from the edges of industrial culture to the center of digital culture. It drove their transformation from a medium in the tradition of analog games, or even sports, to the third audiovisual and culturally defining medium of representation in modern times—after the live theater of illusion, which came into being pre-industrially, and the industrial media of film and television, which feature linear audiovisions produced through stored indexical imprints of reality.

## DIGITAL GAMES VS. ANALOG GAMES AND LINEAR AUDIOVISIONS

As a consequence of this transformation, the history of games consists of two distinct parts, the analog and the digital. Two earlier developments can serve as historical models for this categorical division: the industrial transition of visual representation from painting to photography, and the transition of audiovisual representation from theater to film. Subsequently, scholarly analysis of these various media has also divided itself—into the theory of art and of photography, into theater and film studies. Since digital games do categorically differ from analog games, the theories of analog games should have as little or as much validity for digital games as theories of the theater have for film.[4] The same holds true for the relationship between movies and games.

Thus digital games are characterized by a double alterity, i.e., a relative otherness in relation to the two central media from which they grew and in relation to which they form their own specific identity. Despite what they have in common, digital games distinguish themselves from analog games through what they gained over the course of three evolutionary jumps as well as through what established their aesthetic competition with older, and initially, analog media of theater, film, and television: *first*, procedural simulation including virtualized feedback, *second*, hyperepic multi- or nonlinear narration, and *third*, hyperrealistic representation able to generate perspectival images in real-time.

4 Despite all the historical differences between theater and film, theoretical concerns of the theater hold validity for the cinema; especially in terms of theories of the practitioners—from the traces of Aristotelian poetry in the theories of script writing to the teachings of staging and directing.

Vice versa, the difference between digital games and older audiovisual media is demonstrated in the way qualities which originate from analog games undergo qualitative and quantitative enhancement through the process of their virtualization: their potential for arbitrary interactions realized through game mechanics. Thus the unique media-technological affordances of digital games produce their alterity in relation to older audiovisual media:

- The stage, as a non-storing medium, allows for specific actors to deliver performances that are original and vary from show to show, i.e., in regard to the representation and manipulation of space and time, the stage presents its audience almost exclusively with continual live-action performances which are experienced as diegetically linear and in real-time.
- As storing media, film and television allow chosen actors to be copied and selected and, thereby, it produces performances which do not vary from iteration to iteration, i.e., in regard to the display and manipulation of space and time, these media present their audiences with dis-continually cut and edited storylines, which are experienced linearly and in a time that is both someone else's time and removed from the present time of the audience.
- Digital games, on the other hand, enable general and equal participation in potential performances which vary from iteration to iteration, i.e., in principle, they no longer 'know' a passive audience and involve the user in rule-determined and, in regard to space and time, continual as well as iterative actions which are experienced multi- or nonlinearly and in real-time (and only rarely in a time removed from that of the user). Thereby one must differentiate between games that enable interaction between players and software and those which organize software-assisted interactions between players.[5]

5 This theoretical separation was of course not followed in practice. With tennis or chess, for example, one can usually play against 'the computer' as well as against other human players, all in the same program; where the advantage of the virtual multiplayer game via digital networking rests mainly with the delocalization of the player's opponents. In multiplayer games, the virtual environment also directly impacts gameplay; through simulated weather or, for example, through NPCs, which mix themselves in among the players.

## THE DEFINING MEDIUM OF DIGITAL CULTURE

A theoretical perspective of the history of digital games reveals the tight connection between their evolution in three phases and the unfolding and implementation of digital culture. Essentially games worked as a trailblazing force. In the 1960s they allowed several generations of students an independent and playful use of university mainframe computers. In the 1970s digital arcade games and home consoles empowered average citizens to experience digital hard- and software. In this way, games conveyed, asserts J.P. Wolf, "a positive, fun, and user-friendly image of the computer, which helped to usher in the era of the home computer only a few years later."[6] Both the popularization of the PC as well as its evolution from a machine for the processing of numbers and texts into a transmedial entertainment machine during the 1980s and 1990s was then driven by the desire for, and the requirements of, digital games.

Throughout the process of digitalization, digital games took and continue to take on the role that film possessed during the second phase of the industrialization according to Walter Benjamin: familiarization with a new world that has largely been shaped by virtualization. "The games gave us mass training in how to 'live' inside the pure, weightless, scientific space of the Computer," asserts Rochelle Slovin.[7] As an audiovisual medium—whose products are no longer reproduced and edited to a final cut in the fashion of Taylorization but rather unfold virtually, that is in the medium of software, interactively and in real-time—the digital game, more so than older forms of expression, seems to correspond more closely to the experiences of digital culture, to the requirements of digital knowledge work, to the changing methods of perceiving time and space, to the new concepts of how people should exist and act under the conditions of digital production and communication.

So a conclusive question regarding the double alterity of digital games, i.e., the formation of their medial identity, must be asked: Is this process in its completion stage or will it continue, and if so, in what direction will it develop?

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6 Wolf, Mark J. P.: "The Video Game as a Medium," in: Wolf, Mark J. P. (ed.), *The Medium of the Video Game*, Austin: University of Texas Press 2002, pp. 13-33, p. 5. Also ibid.: "Many people at the time wondered if they really needed a Computer, or what they would use it for, since typewriters, board games, calculators, ledgers, and other technology already served their needs. Games made the Computer a recreational device instead of merely a utilitarian one."

7 Slovin, Rochelle: "Hot Circuits: Reflections on the 1989 Video Game Exhibition of the American Museum of the Moving Image," in: ibid., pp. 137-154, here p. 146.

mentions narration as an important element, and sets aside a special category for conflicts—obstacles and resistance, opponents and dilemmas:

"Traditional dramatic conflict can be broken down into categories such as character versus character, character versus nature, character versus machine, character versus self, character versus society, or character versus fate. As game designers, we might overlay another group of categories, which are player versus player, player versus game system, player versus multiple players, team versus team, etc."[7]

## THE PRINCIPLE OF WORLDBUILDING

Another central method of game design is world building. Game designer David Jones, for instance, reports on creating GTA: "GRAND THEFT AUTO was not designed as GRAND THEFT AUTO. It was designed as a medium. It was designed to be a living, breathing city that was fun to play."[8] Only once this 'game-scape' was finished and one could play with it in every sense of the word, only then were the hyperepic narratives developed that are now associated with GTA. Tom Chatfield thus describes the "aesthetics of world-building" as a central moment of digital culture.[9]

Worldbuilding is certainly not an entirely new practice in the history of the arts. Epic storytelling strove to capture dying worlds, as, for example, Honoré de Balzac undertook with the *Comédie Humaine*. Others attempted to invent entirely new fictional worlds, like J. R. R. Tolkien with *Lord of the Rings*. Dramatic storytelling, however, bound to audiovisual representation in time and space, was largely barred from such worldbuilding—mostly for media-technological reasons; both the production requirements and the circumstances of reception in the theater and cinema. Only with the transition to virtual, i.e., software-based audiovisuality, did the construction and reception of complete audiovisual worlds move into the realm of possibility.

In audiovisual 'story worlds' or 'story universes' three-dimensional areas for action may not completely replace linear storylines, but they certainly start to compete with them. These three-dimensional action areas have to be designed rather than simply described. Thus Henry Jenkins speaks of the "story architec-

7 Fullerton: *Game Design Workshop*, loc. 3206.

8 Schell: *The Art of Game Design*, loc. 2212.

9 Ibid., loc. 2188-92.

ture" of narrative transmedia worlds.[10] Game designers, who develop this kind of 'environmental storytelling', work as "narrative architects […] privileging spatial exploration over plot development."[11]

Aesthetically, the construction of these virtual worlds follows the principles of theming.[12] Theming has been in development since the 1950s in the context of Disney's theme parks, which can be seen as analog anticipations of virtual worlds. Theming connotes design processes of selection, compression, and unifying stylization—the filtering of the audiovisual 'noise' of complex realities or fictions—for the purpose of a more controlled production of experiences.

In the same way that theme parks create fictions into which people can enter, worldbuilding turns digital images from framed windows, through which other worlds can only be viewed (as in the theater or the movies) into interactive portals. They not only allow entrance to fictional narratives, as theme parks do, but also interactive participation and, in turn, new audiovisual experiences. The audiovisual worldbuilding of digital games is therefore different from all previous analog attempts because the resulting storytelling spaces are procedural systems: "a group of interacting, interrelated, or interdependent elements forming a complex whole."[13]

Like all systems, audiovisual game worlds contain objects with specific characteristics and potential ways of interacting with one another. Virtual systems, which are the foundation of all audiovisual worldbuilding for games, simulate biological, social, cultural, and economic conditions, while simultaneously enabling interaction with these simulations. Through these playful interactions users tend to build mental models: "The computer is just an incremental step," says Will Wright, "an intermediate model to the model in the player's head."[14]

For systematic simulations, it is fundamentally important that they concern themselves—independent from any degree of realism—with simplified abstractions of real-world role models: "A simulation does not attempt to simulate every aspect of its referent, but instead focuses on those elements necessary to the game."[15] Different principles can underlie these abstractions, from the produc-

10 See p. 72f.

11 Chatfield, Tom: "Bridging the Gap," *Prospect* 2011; http://www.prospectmagazine.co.uk/arts-and-books/bridging-the-gap

12 See Jenkins: "Game Design as Narrative Architecture."

13 Gottdiener, Mark: *The Theming of America: Dreams, Visions, and Commercial Spaces*, Boulder Colo.: Westview Press 1997.

14 Quoted after Fullerton: *Game Design Workshop*, loc. 4092.

15 Salen/Zimmerman: *Rules of Play*, loc. 785.

tion of specific experiences to the teaching or training of specific skills: "Ultimately, of course, we don't care about creating either stories or games—we care about creating experiences. Stories and games can each be thought of as machines to help create experiences."[16]

It is in the mechanics of these systems—the result of the necessary abstraction processes—where one finds not only the functionality of simulations, but also their message, their ideology. Ian Bogost speaks, therefore, of the "inherent subjectivity" of the world model that digital games offer.[17] Frans Mäyrä demonstrated this fact with the example of Sid Meier's CIVILIZATION:

"[T]he rules of the simulation are built on a particular vision of history, crystallized by historian Arnold J. Toynbee in *A Study of History* (1934-1961, 12 volumes). According to this view, civilizations can be seen as units with life cycles, similar to those that organisms have (a view influenced by the German philosopher Oswald Spengler)."[18]

## AUTHORSHIP IN GAME DESIGN

The steady interdependence between (1) audiovisual systems that are created by game designers—where worldviews, as well as intentions and expectations of how these worlds should be used, unfold—and (2) the actual realization of the potential actions by the players (individuals as well as groups), poses a longstanding question anew for our digital age: How should creative authorship, and in turn author's rights, be defined?

Digital games have created conditions and possibilities for the control of aesthetic meaning incomparable to all that has preceded them: authorship not only by producers but also by users, i.e., players—by individuals, collaborating groups, but also by contributors in distributed networks who hardly know each other. The degree of authorship on the part of the player may vary from genre to genre and game to game, but even the most simple gameplay in virtual worlds generates co-authorship, irrespective of whether players document their actions

16 Schell: *The Art of Game Design*, loc. 5474. Also McGonigal: *Reality Is Broken*, loc. 595: "A good game is a unique way of structuring experience and provoking positive emotion."

17 Quoted after Fullerton: *Game Design Workshop*, loc. 2020.

18 Mäyrä: *Game Studies*, loc. 1454.—See Salen/Zimmerman: *Rules of Play*, loc. 5525: "Games are systems of meaning."

(in so-called *Let's Play* videos) or whether they become co-designers, in a more traditional sense, of their experiences through *mods*.

The specific 'distributed' form of authorship in digital games as well as the specific nature of their dramatic conflict point to a specific sequence of the iterative prototyping process. At its heart lie numerous variations of play testing—by the designers or the team itself, by chosen individuals and diverse focus groups.[19] Concerning play testing, most handbooks on game design stress two requirements. First, the necessity of posing clear questions: "You should be able to state the questions clearly. If you can't, your prototype is in real danger of becoming a time-wasting boondoggle, instead of the time-saving experiment it is supposed to be."[20] Second, the necessity of working initially with analog prototypes: "[I]t allows you to focus on gameplay rather than technology."[21]

Playtesting as a part of prototyping gains an enhanced significance in digital game design when compared to the design of analog objects, where the process of prototyping was developed. Eric Zimmerman writes: "The behavior of complex, interactive systems—like games—is incredibly difficult to predict. You generally cannot know exactly what players are going to do once they start playing your game."[22] This also forms the divide between digital games and linear audiovisions. Unlike theater plays, feature films, or television series, games are not written. As Tracy Fullerton claims: "No one, no matter how smart they are, can conceive and produce a sophisticated game from a blank sheet of paper and perfect it without going through this process," i.e., the process of prototyping and play testing.[23]

19 Vgl. Zimmerman, Eric: "How I Teach Game Design. Lesson 1: The Game Design Process," *Gamasutra*, October 19, 2013; http://www.gamasutra.com/blogs/EricZimmerman/20131019/202710/How_I_Teach_Game_Design_Lesson_1_The_Game_Design_Process.php. More detailed descriptions give Schell: *The Art of Game Design*, loc. 3213, and Fullerton: *Game Design Workshop*, loc. 873.

20 Schell: *The Art of Game Design*, loc. 2104.

21 Fullerton et al.: *Game Design Workshop*, loc. 5218.

22 Zimmerman: "How I Teach Game Design. Lesson 1."

23 Fullerton: *Game Design Workshop*, loc. 603. See Freyermuth, Gundolf S.: "Lesen wird in vielen Computerspielen zu einer Überlebensfähigkeit," in: Böhm, Thomas (ed.), *New Level: Computerspiele und Literatur*, Berlin: Metrolit 2014, pp. 115-144.

## TRANSMEDIA

With the transition from industrial to digital culture, the borders previously set by technology between media begin to fade.[16] What during analog times was separated through the incompatibility of different storage and distribution media—film, television, radio, as well as print with its medial variations of book, newspaper, magazine—is now fusing in production, distribution, and reception; among each other as well as with new, digital forms of expression and representation, which are—like digital games—already structured transmedially themselves.[17] Fictional 'worlds' come into existence both within individual transmedia works as well as between them.[18] Therefore, transmediality can be identified in two ways, both in general and in regard to digital games:

- intensive transmediality, the creation of a fiction or non-fiction container comprising several media, i.e., transcending the traditional media-borders within itself—for instance in digital games of the GTA-series (since 1997) or WORLD OF WARCRAFT (since 2004); and
- extensive transmediality, the diverse representation of one and the same material over and beyond a multitude of media—for instance in the science-fiction franchises STAR TREK (since 1965/66) and STAR WARS (since 1997).

Digital games operate transmedially within themselves in that they utilize both a variety of media for their own design[19] as well as incorporate complete works of other media, from paintings to radio shows and all the way to motion pictures.[20] Furthermore, digital games also integrate, both artistically and economically, into extensive transmedial contexts.[21] In this respect, it is central for Game Studies

16 See Freyermuth: "Der Big Bang digitaler Bildlichkeit," p. 312ff.

17 See Juul: *Half-Real*, loc. 99: "[G]ames are therefore transmedial in the same way that storytelling is transmedial."

18 See for worldbuilding p. 169ff.

19 Striking in comparison to film and also television is the role of the written word. No other audiovisual medium contains comparable amounts of text. Gamers have to be good and fast readers as, in many popular genres, their survival depends on their reading skills. See Freyermuth "Lesen wird in vielen Computerspielen zu einer Überlebensfähigkeit."

20 See Schell: *The Art of Game Design*, loc. 1326-29.

21 A significant aspect is the semi-continuation of play in forums, wikis, video portals, etc., as it helps to form communities and produces paratexts. Focusing on learning ef-

to develop a theoretical conception of digital games as 'transmedial total works of arts' and to determine their position in the evolving digital media dispositif between the poles of intensive and extensive transmediality.

All in all, the development of genuine theories of digital games (theories of the third order) relies on five areas of particular note:

- the interdependency between genre and mechanics,
- the question of the narrative manipulation of space and time,
- the issue of audiovisual authenticity,
- the relationship between interface and agency,
- the question of transmediality and the position of digital games within the digital media dispositif.

fects in internet communication, André Czauderna studied the mechanisms of such semi-continuation of play in a Pokémon forum: Czauderna, André: *Lernen als soziale Praxis im Internet: Objektiv hermeneutische Rekonstruktionen aus einem Forum zum Videospiel Pokémon*, Wiesbaden: Springer 2014.