Book summary

Hans-Joachim Backe
Structures and functions of narrative in computer games. A typological introduction.

Original title: *Strukturen und Funktionen des Erzählens im Computerspiel. Eine Einführung*. Würzburg: Königshausen & Neumann, 2008. ISBN 978-3-8260-3986-7

Context and Aim

In the first fifty years of their existence, computer games have evolved from an experiment in information technology to a commercially successful and controversially discussed branch of popular culture. This development has aroused interest in most academic disciplines. For about ten years now, not only computer sciences and economics have researched the new medium, but also sociology, psychology, literature and media studies. For the greater part, the center of attention is the computer games' unique capability of fusing play and narrative. Only games in virtual worlds enable players to be simultaneously spectator and player, hero and admirer, recipient and part of the story.

Structures and functions of narrative in computer games offers an introduction to this field with a unique focus, addressing both students and scholars of all disciplines. Taking general narrative theory as a vantage point, the text develops a model of computer games in which play and narrative are not conceptualized as competing or hierarchical elements, but as an organic whole.

The focus is on explaining the computer games' ability of integrating and appropriating other media as a result of its nature as a game. This means above all that computer games are not understood "as text" or "as discourse," which would mean founding the whole descriptive process on an analogy. *Structures and functions of narrative in computer games* is centered around the simple premise that games are characterized by the ability to integrate disparate elements.

This approach necessitates a genuinely interdisciplinary theoretical approach, merging transmedial narratology and game theories. Theater studies and ritual theory are also taken into account, as they are concerned with the consequences of actions, the roles of participants and spectators, and the encounter of play and representation – questions of utmost importance for the understanding of narrative games. While each of these approaches has been applied to computer games in the past, they have always been applied one at a time by different scholars, resulting in each approach describing only a few aspects of games. The mul-

ti-faceted approach of *Structures and functions of narrative in computer games* enables a thorough understanding of how different elements – especially the narrative component – of computer games interact with each other.

Structure and argument

The text is divided into nine chapters. The first three chapters explore the scope of the computer game as a medium and describe the current state of research. Chapters four through six present the individual theories necessary for developing the envisioned holistic approach, which is formulated and applied to examples in the remaining chapters.

At the outset, a short overview of previous research in the field shows its traditionally very limited scope. Computer games have usually been analyzed by either treating them as ”interactive texts or movies” in order to stress their narrative aspect, or by deliberately denying or ignoring this narrative potential to foreground the individuality of the medium. These two approaches, identified as ”narrativist” and ”ludologic” by the respective opposition, fall short of describing the specific quality of computer games. *Structures and functions of narrative in computer games* aims at reconciling both approaches by considering its subject matter neither a text nor a ”post-narrative discourse” (E. Aarseth), but simply a very sophisticated and complex form of game.

This premise effects a drastic change in the way computer games are perceived, because it proposes to conceive of narrative as a subordinate function of games – which is only possible by understanding how games work. An appropriately comprehensive and universal theory of games needs not only to specify the way in which narrative can have a function within the structure of computer games. It must also allow for narrative in games to be understood as an optional element, making the theory applicable to narrative games as well as non-narrative games, electronic games as well as traditional specimens. Such a theory cannot be build from the ground up, but selecting existing theories of narrative and games to base the new theory on is a challenging task, especially because both existing theories have to not only be applicable to computer games, but also to be structurally and epistemologically compatible with one another.

Chapter two lays the groundwork for this process by providing a detailed, multi-faceted description of computer games. Defining the properties of computer games is a very challenging task (as the shortcomings of existing definitions show) because of the vast differences that exist not only between different products, but also between the components of individual games. A single product can contain components that share only core elements, while changing the gameplay or setting, necessitating different playing equipment or addressing diverse numbers of players. As is typical of the medium, both narrative and ludic elements can act as the combining factor. This protean nature of the medium necessitates very careful ar-

gumentation, as few observations can be transferred from one example to another without some kind of qualification or modification.

In addition, computer games have evolved tremendously over the last forty years, so that theories have to be revised, updated and often completely discarded, as the subject matter undergoes formal metamorphoses. The degree to which technological development in computer hardware and programming is connected to the development of the computer game is most apparent when one considers the reciprocity of these developments: Dedicated gaming hardware, especially for rendering 3D graphics, has evolved faster than any other sector of computer technology, as game designers have learned over more than a decade to anticipate new hardware and to take advantage of future developments when developing new games.

Thus, the final part of chapter two is concerned with complementing existing descriptive typologies in order to provide a working terminology for the description of the encountered types and components of games. Based on these distinctions, the scope of the following analysis is formulated more precisely. Instead of trying to encompass the whole extent of computer games, the analysis focuses on games played by single players, excluding those played in groups over networks or the internet. The reason for this decision lies with the need for finding applicable narrative theories, which offer no models adequate for the treatment of collective reception. For similar reasons, a number of other constraints apply, limiting the scope to products with graphical user interfaces that were released commercially for PCs, thus excluding text-only forms, amateur productions, and the diverse gaming consoles. These limitations are purely methodological, allowing to concentrate on dominant forms whilst formulating the general theoretical framework.

Chapter three gives an extensive overview of the current state of research. Beginning with a survey of the field and a distinction of schools of thought within narrative gaming studies, the chapter goes on to identify a number of core concepts common to most approaches. There is a consensus about games being thoroughly interactive and about their ability to simulate events, yet scholars differ as to the bearing these qualities have on the discussion of the medium, especially its narrative capabilities. At the core of the debate is an understanding of play and narrative that sees them as opposing, irreconcilable principles with no common ground. The active, unrestricted and seemingly aimless role of a player is considered the exact opposite of the passive recipient of fiction, who is guided trough the linear construction of a text. Relatively recent studies have been arguing against this perception of play and narrative as a dichotomy, citing as an example our ability for role-play in many everyday situations, in which both aspects exist simultaneously even outside games in the strict sense. In computer games, there are numerous areas where both overlap, especially in expository dialogue, which is equally necessary for story progression and informing the player about goals.

Most arguments for the irreconcilability of play and narrative are founded on misconceptions about media. Subchapter 3.4 discusses different concepts of media and text, showing that many definitions of both terms are used without regard for their original concept and their applicability to digital media. This in turn leads to an even more general problem encountered when dealing with ”new media,” the adaptation of theories that have originally been developed for other media. Such appropriations cannot be foregone, but they are prone to certain systemic implications sometimes called ”text blindness” and ”media blindness” (L. Hausken). The transfer of concepts across media borders stresses either the internal structure or the media context of source and target, but never both, and most encountered problems can be traced back to a disregard of this principle. Examples for this are the application of the narrator concept even on media that are not language-based, or the supposition that the distinction between narrative time and narrated time can be applied to computer games with benefit. *Structures and functions of narrative in computer games* tries to alleviate this issue by achieving precise distinctions between narrative and ludic elements, not in order to treat them as if they were independent of each other, but to enable an understanding of where narrative elements are integrated functionally into game structures.

Based on Marie-Laure Ryan’s foundations for a transmedial narratology, chapter four isolates the peculiarities of narrative in computer games and identifies applicable concepts from literary theories. After an overview of Ryans thoughts on the research of non-literary storytelling, the focus shifts to a precise description of the kind of stories told in computer games, i.e. the themes, subject matters and conventions to be found. These observations point toward a tradition that can be traced back to the modes of storytelling encountered in Hollywood movies and sensationalist narrative, especially pulp fiction, with which computer games also share a tendency towards serialization and the establishment of franchises.

This kind of storytelling which relies less on subtle surface aesthetics than on densely constructed storylines and spectacular plot twists is not what the bulk of literary theory is geared towards. As is most obvious with crime fiction – which has obviously much of the riddle, i. e. a game, to it –, narrative in popular fiction tends to favor construction over execution, denotation over connotation, and is as such best analyzed with structuralist tools, which are meant to uncover the hidden workings of deep structure. Structuralist approaches tend to stress the story over discourse, which is beneficial to the analysis of computer games not only because it is appropriate for the kind of story told in them, but also because they perceive stories in a modular fashion that is similar to the makeup of hypertextual structures.

A key element for the description of narrative in computer games is a relatively little known concept of textual constitution developed by Karlheinz Stierle, which includes not only story and discourse, but also the level of occurrence, the actual events that only form the basis for a narrative. As players are not perceiving

(like moviegoers) events after the fact, this model is tremendously helpful in understanding where narrative takes place in games. This kind of immediacy is no contradiction to fictionality, because, as Monika Fludernik has argued, one of the distinguishing features of fiction is experientiality, the impression of sharing an individual experience of events. To describe the way in which single events are connected, Roland Barthes' system of narrative cores lends itself neatly, as it can not only distinguish between different kinds of elements within a story, but is also easily adapted to the special conditions of computer games, i. e. interactive storytelling. Barthes understands stories as a sequence of story points, at which either a character has to make decisions or act in a way that contributes something to the recipient's understanding of the fictional world. This inclusion of choice into the narrative process makes the theory applicable to games: while in conventional stories, the author decides between alternatives, in interactive stories, the player may decide about at least some of them. This, in turn, heightens the impression of experiantiality, lending games a different, but intense impression of fictionality.

A final set of narratological tools is provided by the current neo-structuralist approach of scholars like David Herman, which – adapting concepts of coginitive theory – describes fictional worlds and the mental images recipients form of them as "storyworlds." This concept helps to grasp the interactive recipient's role within the story in showing up the many parallels to traditional storytelling. In the light of Herman's theory, the pictures on the computer screen can be understood as a mere extension of the otherwise purely imaginative process of putting oneself into perspective with the narrative world. Another concept of Herman's, propositional frames, demonstrates the ontological key elements of storytelling, which he uses as a heuristic tool for distinguishing the narrative preferences of metaphorical and actual storytelling, e. g. epics vs. news reports. The six basic functions of narrative he identifies can be applied to computer games as well, to game elements as well as story elements, and can be equally valuable in determining a game's preference of either component. A final argument towards the perception of games and narrative as traditionally kindred forms of expression is John Alexander's demonstration that economical "game theory" is more valuable as a hermeneutic tool for narrative than as a theory of games.

Chapter five is devoted to theories of games. The initial step is to discuss the difficulties involved in defining games. Several traditional approaches to the problem are discussed, and the most widely accepted theory, Johan Huizinga's, is selected as the basis for following arguments. To address properties of computer games that are of lesser importance in other games, especially role playing and behavioral simulation, approaches of theatre studies and ritual studies are also incorporated. Theater studies offers a model of all playful activities as "actions with diminished consequences," which means that they are performed within a safe environment. Ritual studies has recently started considering play as ritual, as there are a great number of similarities: both require rules and iteration, and especially

with computer games, there is the ambivalence of doing things in a virtual environment, that is, doing them while not really doing them. These concepts do not only flesh out the understanding of a player's relationship to actions within the game world, but do also stress that to outsiders, the same events can appear as a game, ritual, or stage play. These key concepts are explored in further depth in the following chapter when addressing the player's function for games.

The next step is a comparison and analysis of theories of play and games to outline their inherent qualities and shortcomings. A comparison of typologies of games shows the wide range of properties that can be chosen as a basis for categorization, and illustrates the lack of homogeneity between approaches. Out of all existing approaches, only the holistic system of playing styles developed by French structuralist Roger Caillois is applicable to the specifics of computer games. His complex system for categorizing games has often been taken at face value, which (together with some obscurities in the English translation) have led to his theories being frequently misrepresented. When venturing beyond the simple definitions he offers, a reading and interpretation of Caillois' theory produces a finely tuned set of tools for distinguishing not only games in the strictest sense, but also a great number of other forms of pastime activities, e. g. fairground attractions. For these reasons, the remainder of chapter five adapts Caillois' concepts for computer games, which is easily done by some minor modifications and supplementations.

Interestingly enough, Caillois' system becomes in itself clearer and more applicable with the modifications necessary for the proper description of computer games, as they resolve some intrinsic problems of his reflections. The two most noteworthy changes are an understanding of his game categories as transient and dynamic – players constantly change the way they play while playing – and the introduction of games of the first and second degree, a method distinguishing between rules governing single games and series of games in leagues or tournaments. The idea is that a single game has rules that are not influenced by whether it is followed by another game or not, in the same way that the rules governing the progressions through ladders or leagues are independent of the actual game that is being played. This distinction is elementary for computer games with their organization of playful activity along the lines of either ludic or narrative structures. Even the touchstone of all theories of gaming and the least resolved issue of Caillois' system, the question of gambling, can be explained by this two-layer model of ludic activities. To Caillois, gambling seemed to defy the laws he had discovered for games and resist categorization, because it puts values at stake that are extrinsic to the actual playing process – a contradiction also to the theatre studies category of "diminished consequences." The concept of games of the second degree resolves this issue, because it can describe gambling as two nested processes, where an outer one takes the outcome of the inner one as the basis for a game of chance. Thus, the second degree game of luck fits into Caillois' types, as betting on horses, dice, or a match of soccer is always the same type of second degree game, only based on dif-

ferent first degree games (which are, in themselves, again identifiable with certain game types).

Chapter six furthers these ideas by exploring the nature of rules in computer games in greater depth. When understood as simulations, computer games expose two divergent sets of rules. While one set of rules governs the physical nature of the game world – even simple physics like gravity and their effects on the simulated world have to be calculated –, the other is what we usually perceive as rules, defining goals for playful activity and assigning meaning to actions within the game world. What is essential here is that simulation is not only a technical term describing the construction of a virtual world through computation, but a mode of communication vastly independent from representation. A simple example for this distinction is the comparison between a photograph of an airplane and a simple paper airplane. No matter how detailed the photograph, it is only a signifier for ”airplane” and everything connected to this notion, while the simple toy is able to actually be a plane, to fly, to land, to generally simulate the behavior of a greater, more complex system. Perceiving games in this way does not run contrary to any established theory of traditional, non-electronic games; even economic game theory can be considered a form of simulation, calculating the outcome of bargaining processes based on quantified assumptions about human behavior. Gambling is, again, a critical issue, because games of chance seem to carry little traits of simulations. There is, however, a very simple anthropological explanation: If we imagine the test of ones luck on a small and limited scale as a signifier for life at large, gambling appears as a kind of oracle, becoming a yardstick for the favor of the gods, the universe, or another powerful influence in any given belief system.

Subchapter 6.3 deals with the player’s role and function in single player computer games. Single player games differ from traditional games for two or more players in a number of respects, especially in their linear (or multi-linear) structure, which is a marked deviation from the circular construction of most board games or sports, where the same situation is replayed again and again. This linear progress through a game is, at the same time, one of the most significant similarities to narratives.

The relationship of a player and his or her representation in the game world, the avatar, is exceedingly complex, because it can oscillate between identification, identity, and iconography. Regardless of genre, the player’s conception of him- or herself being, simultaneously, on one level the avatar while remaining the player on another, resulting in a state of mind which is best described as role-playing. The genre of computer role-playing games is therefore chosen to demonstrate the specifics of this type of role-play, because its mechanics are present in all other types of computer games, albeit to a lesser extent.

Chapter seven combines the theoretical findings of previous chapters. Based on the distinction of types of rules in chapters five and six, a model of three layers of play is formulated. The topmost level is the macro-structure, which organizes indi-

vidual acts of play or separate games. It is a structure that can be a second-degree game – a tournament or league, based on rules – or a narrative structure, based on the principles of storytelling, creativity, and logic. The middle level is the micro-structure, in which the player is given goals to achieve, and which thus produces a structure that is based on goal-rules. This is mostly identical to what Caillois describes as *ludus*, goal-oriented play, where a player tries to be successful. The lowest level is the sub-structure, where there are no aims apart from enjoyment, and thus no structural restraints. The player's actions are limited by the make-up of the gameworld only, as there are world-rules – the "laws of nature" inherent to the gaming environment – that cannot be broken. This model is also applicable to non-virtual games, because it explains penalties as reinforcements of world-rules that players would not be able to violate under the strict circumstances of simulated environments.

This model reconciles the goal-orientation of games, the freedom of play, and the linear progression of narrative, as they are principles governing distinct ontological layers within the act of playing. It also allows for a precise description of the players influence on the narrative, which can be shown to be coupled to aims formulated in the microstructure. Furthermore, the layer-model makes it possible to graphically render the processes of playing narrative games, and to distinguish different types of narrative bifurcation based on user input.

This last point is the basis for the formulation of categories of narrative computer games in chapter eight. Here, the possibilities for categorization are perused one final time, before the decision is made to chose the ways in which the player can influence the narrative progression. This parameter appears to be privileged insofar as it is directly connected to the defining characteristic of narrative games, the ability to influence the story's progression. The previous chapter has demonstrated that there are basically three ways in which the player can influence the game's macro-structure, through decisions, through performance, and through character development of the avatar. Decision-making, the most obvious method of influence, does not differ significantly between computer games and simple hypertexts: the player is offered alternatives between which to chose. Performance, on the other hand, does not figure into hypertexts, while games can (and do) record the players achievements, the quality and quantity of success made throughout the game. The decision for alternative story arcs can be made automatically by the game, based on how well or badly a player performed in a given situation, even one that occurred at a much earlier time. The third factor, choice and development of the avatar, shows the impact role-playing can have on the story. The player can not only decide how to act, but is often allowed to freely create the avatar's character, choosing and improving not only game-relevant abilities, but also basic properties like race or gender. These factors are usually of lesser relevance to the middle and lower levels of game structures, but can prove to be decisive for story development.

The typology derived from these parameters is a grid of eight classes of games based on whether they employ these possibilities for influence, individually or in combination with each other. This typology does not necessarily formulate a difference in quality between types, but describes how interactive their storytelling is. The second half of chapter eight presents examples for each of these eight types, detailing the way in which they employ the specific forms of influence and how these contribute to the narrative process. The examples point out that games without any possibility for user influence of story progression often are very successful and interesting narratives, excelling at coherence and emotional involvement – factors that more interactive stories often lack. The particular ways in which they make up for these shortcomings are easily demonstrated by analyses of types four through eight, which each stress the strengths of narrative computer games. Especially remarkable is the great number of examples which can be found for the most complex category, type eight, in which all possibilities for user influence are employed. The examples also show how much diversity there is within the types, which is again especially true for the very extremes of the spectrum, types one and eight. There are, for example, marked difference in the way different modes of influence are integrated in the games, whether individual story bifurcations are results of single or multiple modes of influence.

The final chapter addresses the issues left open by the survey. First, there is the issue of other platforms than the PC, which have been excluded from the study. The results, especially the layer-model of games and the typology, should be verified by analyzing games on other platforms, especially handhelds like the Nintendo GameBoy series. Second, the narrative model applied in the survey remained strictly formalist to enable the first step of establishing the structural role of narrative in games. The understanding of the syntax of narrative computer games would, of course, greatly benefit from further studies of their semantics. Third, the findings, especially in the field of theory of games, should be applied to multiplayer games and checked against their specific narrative devices and player-avatar-relations.

The book closes with a bibliography and a glossary of narrative gaming related terms.

Table of contents