Play and Narration as Patterns of Meaning Construction: Theoretical Foundation and Empirical Evaluation of the User Experience of Interactive Films

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Abstract. The central scope of the research project is a theoretical qualification (and empirical evaluation) of play and narration as different patterns of meaning construction. Based on cognitive film theory and theories of play an opposing specification of playful and narrative perception patterns is developed. Playful and narrative meaning construction are understood as interdependent constructs whose interferences/ interactions are to be analyzed. The theoretical concept is empirically surveyed by comparing the user experiences of a linear fictional film with those of two interactive versions of the same film. The initiating hypothesis is that interactivity enforces playful perception patterns and diminishes the relevance of narrative patterns for the users' experience.

Keywords: Play versus narration, playful versus narrative meaning-construction, user experience of interactive stories/ interactive films, meaning construction and user experience.

1 Introduction

The central scope of the research project is a theoretical qualification (and empirical evaluation) of play and narration as different patterns of meaning construction. Preliminary, notions of interactivity and play as linked concepts shaped the framework. The aim was to evaluate on an empirical basis if an interactive form produces playful reception patterns,[1] and how this effects on return existing narrative forms of perception.

The underlying assumption is that any kind of user experience is based on an active process of meaning making, which is connected to the concrete form of the media product.[2] The evaluation of the user experience in terms of pleasure or suspense should therefore be based on a preceding evaluation of meaning construction.

In a comparative analysis the core components of play and narration as forms of meaning construction are discussed and qualified on a theoretical basis. The two concepts are perceived as polar dimensions, which can intersect and correlate. It is

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[1] These reflections refer to different theoretical approaches on interactivity and interactive media. See, e.g. [1].

[2] Based on theoretical approaches of symbolic interactionism and constructivism. See, e.g. [2], [3].

understood that there are possible dominations of either a more narrative or a more playful form of perception, which is to be specified.

The following research tasks were formulated:

1. How can playful and narrative patterns of reception be specified on a theoretical basis
   a. in terms of meaning construction and
   b. with regard to the derived qualities of involvement?
2. The empirical evaluation of meaning construction and involvement analysing the reception of a linear film compared to interactive narrative films based on these concepts.

2 Theoretical Framework

In order to analyse the process of meaning construction in dependence of the textual quality (interactive vs. linear) different levels and components of the reception process were defined. The separation of user activity and interpretation process and the interdependencies of the two levels is regarded as crucial concept in this framework. The presupposition is that the meaning construction (in cognitive and emotional respects) in an active context differs from that in a passive perception context. It is assumed that most of the existing research in interactive narration suffers from a preconditioned equivalence of meaning construction in linear and interactive stories as acting in a given fictional world and neglects possible interdependencies of user activity and meaning construction in the first step.[3]

The aim is to specify narrative and playful patterns and the correlating forms of interpretation and emotional involvement with regard to previously separated components of the perception process.

2.1 Specification of Play and Narration as Patterns of Meaning Construction and Derivation of Specific Forms of Involvement

The qualification of narrative perception patterns and components of interpretation and involvement is mainly based on cognitive and psychological film theories outlined by Edward Branigan, Ed Tan, Murray Smith and David Bordwell [7-10]. As there is hardly any theoretical work on play as perception pattern[4], this part is based on theoretical reflections of different fields of play theory.[5]

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[3] The idea of the user acting in a given narrative context, without questioning the construction of the diegetic world as precedent process, is stated in several studies focusing on concepts of media effects in relation to given expectations and motivations (like e.g. Zillmans entertainment theory.) See e.g. the surveys of Vorder/Hartmann/Schramm [4] and Schlütz [5]. Also in Klimmt´s level based concept of enjoyment of playing digital games the framing narrative level is discussed in terms of generalised narrative contents: "On this level, the players most often participate in a narration (…)" [6].

[4] The research of Ohler/Nielding [11] in playful patterns of film reception seems to be one of the rare exceptions.

[5] Amongst others: the philosophical perspective of Klaus, Georg [12] and the psycho-sociological analysis of Sutton-Smith [13].

Table 1. Overview on play and narration as patterns of meaning construction and correlated forms of involvement[6]

Patterns of play in media perception	Patterns of narration in media perception
1. Interpretation	1. Interpretation
• domination of relational meaning construction • flexibility of external reference (operational meaning) • two-stage process of primary and secondary meaning construction (reframing) • textual coherence based on structural qualities • process of divergence • formal and pattern based linking	• domination of referential meaning construction • explicit external reference (eidetic meaning) • semantical form of building reference focussing on human activity and events • textual coherence based on semantic reference to real life experiences • process of convergence • domination of causal linking of meaningful units
2. Involvement	2. Involvement
• self centred involvement in active meaning construction • focus on self experience • act of creating diversity and variety • joy of exploring abstract concepts, structural relations • gratification of feeling of competence	• external focus on understanding a given meaning • focus on the experience of others • act of narrowing down the most possible meaning • interest in thematic fields, concrete actions and events • gratification of empathetic understanding/ sympathy
3. Distance/sovereignty	3. Distance/sovereignty
• distance by abstracted reference to reality • control of selfdirected activity	• distance by reinterpretation of narrative point of view • control of cognitive and emotional dedication

3   Empirical Study

3.1   Central Hypotheses and Research Design of the Empirical Study

The initiatory hypothesis is that the interactive quality leads to an increased relevance of playful patterns in meaning construction and user experience. Based on theoretical

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[6] The specifications refer to idealized concepts, not to actual processes. The reference for the narrative pattern is the perception of a simple (nonfictional) kind of narration. The table gives a reduced overview on the main aspects without explicit separation of the considered levels of involvement (like general aspects of meaning construction, process-related aspects, the act of media usage, communicational aspects).

reflections on meaning construction and involvement during the perception of linear films, assumable changes correlated to an increase of playful reception patterns were derived.

The underlying understanding is that an alignment with the characters as possible real persons and the involvement in their actions and needs is a central concept for the user experience (of an all time drama movie). Based on the different characteristics of playful reception patterns (described above) the main suppositions are that the user's perception is more self centred, engaged in the process of constructing different possible versions (and therefore less empathetic).

The central hypotheses of the experimental study were:

- The interactive movies are perceived as less realistic and the user's awareness of the artistic quality is more distinctive.
- The characters are considered more functional, and less personal. Empathic involvement is diminishing.
- According to the degree in empathy, the involvement in the course of the story is lower.

The empirical survey has been carried out in summer 2006 at different universities in Berlin. There were three experimental groups (n = 37, 38, 47), each watching a different variation of a short fictional movie, one linear version and two slightly distinct interactive versions. The two interactive versions allowed the users to choose some actions of the protagonists. At four plot points, the film was frozen and the users could choose whether either the male or the female main protagonist should act (Fig.2). In the third version an additional score was shown evaluating the user's choice (Fig. 3 and Fig. 4). The plot and interactive structure were identical to version 2. The participants answered a standardised questionnaire and additional group interviews (with 7 to 9 participants) were performed for each version.
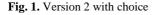

Fig. 1. Version 2 with choice   **Fig. 2.** Version 3 with scores after choice

3.2 Main Results from the Empirical Study

The evaluation of the standardised questionnaires indicated irritating and contradicting results in the first place. The second version achieved the best marks (see Table 1) for all main items (entertainment, realism, suspense, and empathy) whereas the linear

and the third version (with scores) polled notably worse and reached about the same ratings. Different control variables (age, gender, digital gaming experience, genre preferences) were checked and gave no results.

Table 2. Evaluation of the film versions: Means of the Main Items

Items (short titles)	Means (1 = very good ....5 = very bad)		
	Film 1 (linear) n = 47	Film 2 (interactive) n = 38	Film 3 (with scores) n = 37
Overall evaluation	3,0	**2,5**	2,9
Empathy/ Kirsten	3,4	**3,2**	3,6
Empathy/ Kai	2,8	**2,4**	2,8
Authenticity Characters	3,4	**2,9**	3,4
Realism	2,9	**2,5**	2,9
Suspense	3,3	**2,8**	3,3

Besides the unexpected high evaluation of the second version compared to the linear version, the more difficult task was to explain the differences between the second and the third version.

The analysis of the interviewees allowed for a further insight into the underlying thoughts and motives of the participants. The evaluation of the guided interviewees focused on two aspects: A clustering of the statements as it regards the content according to the evaluation of the main items, and an additional evaluation of the quality of the statements with regards to the degree of meta-reflection on the film construction or abstraction of an immediate discussion of plot events. As the total account of the interview participants is relatively low, the interpretations do not base on representational data, but can be seen as hints for further research.

In contrary to the previously made assumption the participants of the second group were notably deeper engaged in the characters' personalities, motives and actions than those of the linear version. The statements and discussions were mainly preoccupied with the characters and their activities. Differently the discussion in the first group was more directed towards a judgement of the film as a whole perceived from the perspective of a spectator. In the third version the preliminary demand to help the loving couple to come together and the scores seemed to initiate the predicted changes towards a more self-centred and functional perception. The participants were mostly preoccupied with reaching their goals and showed a more distant perception of the characters. The bad evaluation seemed to be caused by the combination of a lower involvement in the fictional story and an unfulfilled desire to manipulate the story according to own ideas.

4   Conclusion

Despite the unpredicted results of the questionnaire, the theoretical construction of polar dimensions of narrative and playful perception patterns are estimated as

consistent concepts. The analysis of the interviews seemed to underpin the hypothesis of changing meaning construction due to different alignments of the users' perspectives. The highly distinctive evaluations of the second and third versions based on very small changes demonstrate the relevance of specific design components for the user experience. This leads to the conclusion that further research in the relationship of interactive design qualities and meaning construction based on playful or narrative patterns seems promising.

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