

## Conceptualising Computer Game Experience: Narratives, Play, and Hypermedia

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### Abstract

Computer games are now an important aspect of consumer culture. However, there is little known about the experiential aspects of their consumption. Informed by interdisciplinary studies of computer game theory, hypermedia literature, and theorisations of consumers' experience in computer-mediated environments, we conceptualise computer game experience as a hypermedia activity that immerses consumers in storytelling *and* at the same time engages them in play. For scholars, our conceptualisation provides insight into the experiential aspects of computer games that have not been previously addressed in the literature. For practitioners, the developed model provides insight into consumer preferences of computer games that could be useful in the development of even more appealing computer games.

Keywords: consumer, behaviour, experience, source

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### Abstract

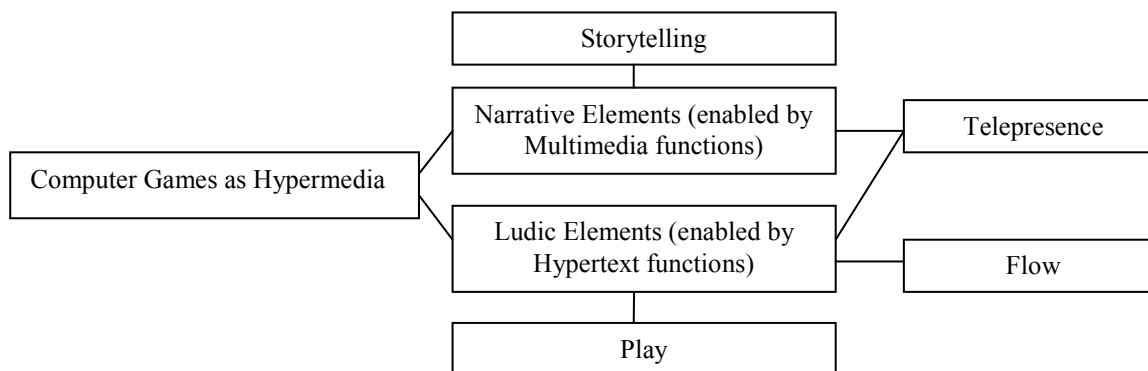
Computer games are now an important aspect of consumer culture. However, there is little known about the experiential aspects of their consumption. Informed by interdisciplinary studies of computer game theory, hypermedia literature, and theorisations of consumers' experience in computer-mediated environments, we conceptualise computer game experience as a hypermedia activity that immerses consumers in storytelling *and* at the same time engages them in play. For scholars, our conceptualisation provides insight into the experiential aspects of computer games that have not been previously addressed in the literature. For practitioners, the developed model provides insight into consumer preferences of computer games that could be useful in the development of even more appealing computer games.

### Introduction

In less than two decades computer games have become one of the most pervasive, profitable, and influential forms of entertainment (Squire, 2003). In 2008, The Entertainment Software Association (ESA) reported that over 65% of the US population play computer games, and that annual sales are expected to generate \$30 billion worldwide (Williams, 2002). Due to their unprecedented popularity, especially among young people and children, computer games are now an important aspect of consumer culture (Fromme, 2003). Consequently, marketing researchers and practitioners have begun to show interest in the opportunities that computer games bring for marketing practices. Belk (2002) has argued that computer games can provide insight into the role of consumers in new product and service development; and Kozinets (1999) has noted that computer games are often a source of shared meaning that bond together virtual communities of consumption and, as such, they "offer marketing and consumer researchers, and other social scientists, an important space from which to examine the intersection of recreational and relational online modes in the creation and collective consumption of fantasy experience" (Kozinets, 1999, p. 262). Although computer games are becoming an important aspect of consumer behaviour (Kozinets, 1999; Belk, 2000) there is little known about the experiential aspects of their consumption in marketing. Holbrook et al. (1984) in their pioneering study on playful consumption used video games as stimuli for their experimental design. The authors noted that the enjoyment of these games depended on the personality-game congruity and the perceived complexity of the game. Consumers showed a tendency towards preferring the game formats that matched their cognitive style (visualising/verbalising) and the enjoyment increased with mastery of the game. Several studies also suggest that consumers enjoy playing computer games because they allow consumers to interactively socialise with other players (Kozinets, 1999; Hsu and Lu, 2004). This prior research provides particular instances of computer game environments but an incomplete picture of consumer experience regarding the multidimensionality of computer games.

The purpose of this paper is to address a gap in the existing literature by proposing a more complete and holistic conceptualisation of computer game experience. For scholars, our conceptualisation provides insight into the experiential aspects of computer games that have not been previously addressed in the literature. For practitioners, the developed model can be

useful in the development of even more appealing computer games. We reviewed studies of computer game theory (Aarseth, 2001), hypermedia literature (Landow, 2006), and theorisations of consumers' experience in computer-mediated environments (Hoffman and Novak, 1996), and found common elements of computer game experiences across these different disciplines. We used these findings to build a new conceptual model of computer game experience that views computer games as hypermedia. We propose that computer games are comprised of narrative elements, which are enabled by multimedia features of hypermedia, and ludic elements, that are enabled by interactive hypertext functions. During digital play, narrative elements of computer games engage consumers in storytelling, whereas ludic elements engage consumers in play. Furthermore, previous research shows that in computer games consumers experience telepresence and flow (Hsu and Lu, 2004). Our model illustrates links between narrative and ludic elements in computer games and the experiences of telepresence and flow. We theorise that narrative elements enhance the experience of telepresence by making digital play more vivid, whereas ludic elements enhance telepresence by making digital play more interactive, which consequently also enhances the experience of flow. These conceptualisations are depicted in Figure 1 below.



**Figure 1. Conceptual Model of Computer Game Experience**

### Narratology and Ludology

An insight into consumers' experience in computer games can be gained from emerging computer game theory (Aarseth, 2001). This theory can be characterised by the existence of two opposing approaches to the study of computer games – narratology and ludology (Brand and Knight, 2005). The narrative approach (Murray, 1997; Jenkins, 2004) emphasises similarities between computer games and narrative forms. Murray (1997) described video games as storytelling mediums, where the game players get to become another person and to act in another world. Jenkins (2004) further conceptualized computer games as 'environmental storytelling', and argued that computer games create preconditions for an 'immersive narrative experience' by the means of storytelling elements, such as characters, settings, and plots. The conceptualisation of computer games as a form of story has an important implication for consumer researchers. Stories, in the form of myths, permeate consumer culture (Stern, 1995; Thompson, 2004) and influence consumers' interpretation of their experiences (Thompson, 1997). Hirschman (2000), for instance, found that the characters and plots of popular U.S. motion pictures reflect the ideas and flaws of the contemporary American society; and Stern (1995), using the example of Thanksgiving Day rituals, noted that the meaning of consumer experiences could be inferred from the stories that

these experiences convey. These findings, therefore, suggest that computer game experiences can be explored by understanding meanings that are discoursed by the story elements in computer games.

Unlike narratology, ludology (Frasca, 1999; Eskelinen, 2001; Aarseth, Smedstad, and Sunnanå, 2003) perceives computer games to be a form of play. Eskelinen (2001) noted that computer games are complex spatial interactive structures that can facilitate play experience. Therefore, computer games are fundamentally different from the sequential narrative structures of traditional storytelling mediums that resist such interactivity (Frasca, 1999). While both traditional narrative and ludic structures can be represented as the progression of some sort of states or episodes, narratives have a fixed sequential progression of episodes, whereas in games this progression is unfixed and depends on the player's actions within the game (Smed and Hakonen, 2003). Therefore, the set of episodes that players experience in games is different for individual consumers and depends on the player-game interaction. By capturing the interactive process that occurs between consumers and computer games, ludic research emphasises that computer games are a form of play in which consumer experience depends on the game's rule-based system and which, according to Huizinga (1950), is one of the essential components of play. These studies suggest that another lens for studying computer game experiences can be exploring computer games as a form of play, and their consumption as intrinsically-motivating consumer behaviour (Holbrook et al., 1984)

Existing theory on computer games, therefore, sheds some light on computer game experience. On one hand, ludic research shows that computer games are characterised by play. Therefore, consumers' experience of computer games can be researched in terms of the characteristics that define playful consumption (Holbrook et al., 1984; Caillois, 2001). On the other hand, there are narrative story components (i.e., existents, events and plots) in computer games (Jenkins, 2004), suggesting that the experience of computer games can also be explored in terms of meanings that are discoursed by computer game stories. We now introduce the notion of hypertexts and hypermedia to illustrate how the narrative *and* ludic elements in computer games are related to each other and facilitate the emergence of telepresence and flow in computer games.

### **Computer Games as Hypermedia**

Hypertext is a concept of “non-sequential writing – text that branches and allows choices to the reader, best read at an interactive screen. As popularly conceived, this is a series of text chunks connected by links, which offer the reader different pathways” (Landow, 1992, p.100). Thus, hypertexts are computer-mediated interactive mediums (Steuer, 1992) that possess structures which allow readers to navigate their readings within the text's space. There are three main ways in which hypertexts are different from ordinary sequential texts: hypertexts have (1) a non-linear organisation of materials, (2) links that allow a reader to jump from one lexia to another, and (3) the ability to navigate through the hypermaps of links. First, hypertexts contain a non-linear organisation of material. According to Edwards (1994), it is similar to reading a book according to its index rather than in the order of presentation. Second, within its body of text, hypertexts may contain interconnections, known as ‘links’, that allow a reader to jump from reading one part of the text to another part of the same text or even to a different hypertext (Edwards, 1994). The individual text units that consumers encounter in the system of hypertext are called ‘lexia’ (Edwards, 1994). Thus, in hypertexts consumers are able to construct their own customised readings from all available lexia by

navigating through the system of links. Finally, links within hypertexts can be used to represent a structure of the knowledge contained in the text, which creates a separate hypertext represented implicitly by the links themselves. Edwards (1994) refers to these derived hypertexts as hypermaps, and notes that hypermaps “allow the user literary to navigate through the system [of texts] using the graphic maps of the available pathways” (p. 234).

Landow (2006) has noted that computer games are based on the medium of hypermedia. Hypermedia is a “logical extension of the term hypertext, in which graphics, audio, video, plain text and hyperlinks intertwine to create a generally non-linear medium of information” (Lee and Ju, 2007, p.511). Therefore, hypermedia possesses not only the features of hypertexts but also the features of multimedia environments (Landow, 1992). The conceptualisation of computer games as a type of hypermedia reveals that narrative and ludic approaches to the studies of computer games are not mutually exclusive. Instead, they are complementary as they address different aspects of hypermedia environments. First, the multimedia features of hypermedia, such as video and audio stimuli, permit computer games to create the narrative elements of a story (i.e., characters, settings, and plots) (Jenkins, 2004) that are used to communicate the happenings of the games to players. These narrative elements in computer games resemble other forms of media texts such as motion pictures or animation. In other words, computer game lexia – the text units of a hypertext system – consist of narrative elements of computer games. However, although the progression of narrative elements in animation or motion pictures is fixed and consumers have no way of influencing it, this is not the case with computer games. Hypermedia possesses the three key features of hypertexts – (1) non-linear organisation of materials, (2) links that allow a reader to jump from one lexia to another, and (3) the ability to navigate through the hypermaps of links (Bolter, 1991) – that permit players to interact with the game lexia and construct their own ‘reading’ of computer games. In such a ludic approach, it means that the hypertext features allow computer games to have an interactive system of game rules (Eskelinen, 2001), which make consumers’ experience in computer games a form of play (Huiznga, 1950). The hypermedia literature, therefore, indicates that in computer games consumers are exposed to both the narrative elements, enabled by multimedia features of hypermedia, *and* the play/ludic elements that are enabled by hypertext features of hypermedia.

### **Computer Game Experience: Telepresence and Flow**

In hypermedia environments consumers evoke the experience of flow, and also telepresence (Hoffman and Novak, 1996). Therefore, these theoretical constructs are also experienced by the consumers’ of computer games. According to Coyle and Thorson (2001), if presence is defined as the direct experience of reality, then telepresence is the mediated perception of direct experience. “A person whose perception is mediated by a communication technology necessarily perceives two separate environments [physical and computer-mediated], and telepresence occurs when the perception mediated by the technology takes precedence over the unmediated perception (Coyle and Thorson, 2001, p.66). Therefore, when consumers experience telepresence they are completely immersed within the hypermedia environment and their experience of the computer game becomes more ‘real’ than real life. Researchers have found that telepresence is evoked by the medium’s interactivity and vividness (Naimark, 1990; Laurel, 1991; Steuer, 1992). Interactivity is defined as “the extent to which users can participate in modifying the form and content of a mediated environment in real time” (Steuer, 1992, p. 84). Within the context of computer games, interactivity is evoked during

consumers' interaction with the system of game rules (Eskelinen, 2001) that is permitted by the hypertext features of hypermedia. Vividness is defined as "the representational richness of a mediated environment as defined by its formal features; that is, the way in which an environment presents information to the senses" (Steuer, 1992, p. 81). Computer games communicate the happenings of the game to consumers using narrative elements (Jenkins, 2004), which means that the vividness of computer games is represented by the narrative elements of computer games. These elements construct a computer game world – the liminal space where consumers experience the happenings of a computer game (Juul, 2005). Therefore, in computer games the consumers' experience of telepresence is evoked by the ludic elements that enable interactivity *and* the narrative elements that account for the medium's vividness. The consumers of computer games also experience the state of flow. Flow is the state where consumers entirely focus on interaction with the medium and screen out all other thoughts (Hoffman and Novak, 1996). In computer games, the flow experience is evoked by the hypertext features of hypermedia that permit computer games having the systems of rules that interact with players. Therefore, not only the ludic elements contribute to the emergence of telepresence, but they also account for the state of flow that occurs in computer games. Furthermore, several researchers have noted the relationship between telepresence and flow (Hoffman and Novak, 1996; Novak, Hoffman, and Yung, 2000; Coyle and Thorson, 2001). Telepresence makes the consumer's perception of a computer-mediated environment more 'real' than the physical environment (Coyle and Thorson, 2001). Hoffman and Novak (1996) noted that although such experience is not sufficient to evoke the state of flow by itself, it is capable of enhancing the intensity of the consumer's experience of flow. When telepresence makes the consumer's perception of the hypermedia more 'real', it also makes computer-player interactions more intensive as consumers have an enhanced vividness of these interactions (Steuer, 1992). More intensive interactions, in turn, require more focused attention from consumers and enhance a consumer's experience of the flow state. Thus, telepresence is the antecedent of flow that enhances consumers' experience of this state (Hoffman and Novak, 1996). Our discussion, therefore, leads to the conclusion that computer game experience appears to be a multidimensional consumption experience which is accompanied by the experiences of telepresence and flow. The creation of this experience is facilitated by the means of consumer interactions with the ludic elements that engage consumers in play, *and* the narrative elements that immerse consumers in storytelling (Figure 1). Our paper therefore offers a contribution to the existing literature by providing an interdisciplinary and more holistic view of computer game experience. For practitioners, the model can also be useful in the development of even more appealing computer games.

### **Future Research**

The conceptualisation of computer games as a hypermedia incorporating the elements of both narrative *and* play is a fruitful area for future research which could explore how consumer experience of play in computer games differs from other playful consumption. Moreover, since computer games are often a multiplayer activity (Hsu and Lu, 2004), future research could also investigate what happens in computer game experiences when consumers play with other players. Finally, it should be noted that the purpose of this study was not to describe computer game experiences per se, but it was rather to draw researchers' attention to the experiential aspects of this unique type of consumption within consumers' lives. We suggest that future researchers utilise the theoretical (etic) and conceptual issues noted in this study and conduct empirical research to explore the consumer (emic) experience (Spiggle, 1994).

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