The Challenges with Evaluating Interactive Narratives

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ABSTRACT
In this article, we offer a literature review of narrative perception research and review seminal work in media psychology within the context of emerging interactive media consumption.

General Terms
Measurement, Experimentation, Human Factors, Theory

Keywords
Narrative Evaluation, Narrative Perception

1. INTRODUCTION
Roland Barthes described stories as a universal concept reaching out to all throughout a multitude of formats and media [1]. Nearly half a century after the publication of the “Structural Analysis of Narratives”, our understanding of what constitute a story has been further challenged as local societies merged into global communities and mobile technologies allowed for information to spread almost instantly. Technology has played a crucial role in supporting and offering opportunities through which new interactive modes of narrative communications emerged. It has asserted itself at the heart of narrative communications and will play an important role in determining the future of narrative media. Evaluating interactive narratives is a complex and non-trivial task. They are inherently subjective and might not be equally shared by all. For the entertainment art form is generally expressed through the portrayal of dramatic events, the perception of any given story is therefore deeply influenced by the individual and determined through external factors such as collective/personal beliefs, memories and the wider aspects of context (time, space, societies and politics).

2. MEASURING NARRATIVES
The user’s experience of classical linear narratives is a domain that has been widely explored by scholars in many disciplines. Media Psychologists have accumulated a large and solid body of knowledge on both the effects and the consequences of stories’ consumption on audiences. They have devised methods to explore them and although it is assumed that perception of traditional content differs from that of interactive material [2, 3 and 4], aspects thought to be relevant in explaining the consumption of traditional narratives have also proved to be useful and inspiring to interactivity-based studies. In many cases, elements of traditional narrative consumption can still be observed and measured within various interactive contexts.

2.1 User Engagement in Linear Narratives
User engagement in conventional narratives has been essentially conceptualized via transportation [5, 6], presence [7, 8], perceived realism [9, 10], and characters identification [11]. To some extent, these are also good indicators of narrative engagement [12]. While these concepts essentially describe the experience of narrative perception, Busselle and Bilandzic [13] propose a specific scale for the measurement of engagement organized into four dimensions: a) comprehension of the narrative; b) attention focus; c) narrative presence, and d) emotional engagement. The scale has been further validated in further work by the same authors [14].

2.2 User Engagement in Interactive Fictions
The perception of interactive stories has also been the subject of observations from media psychologists for some time. Researchers have been interested in exploring the consequences of audiences’ active participation in the complex experience of processing narratives and existing research informs that the active participation of the audience in the configuration of the narrative affects the evaluation of the content and its components, the consumption experience itself, and the emotional and cognitive aspects related to the viewing. Studies associated to interactive fictions have provided specific evidence on the effect of interactivity on user’s perception of entertainment [15], enjoyment [16, 17], gratification, and likeness of the experience [17]. Moreover, investigators also discovered that interactive content affects users’ evaluations. Soto-Sanfeli et al [18] found that interactive movies with a happy ending elicited a higher level of enjoyment, gratification and likeness of the experience than interactive movies with sad ending. Interactive fiction generally operates by selecting plot options at key moments during the viewing experience [19, 20 and 21] and are thought to be halfway between the greater participation of receivers, required by digital games, and the passivity of traditional audiovisual media consumption [18, 15]. However, empirical research on interactive fictions is scarce and mainly focuses on observing the impact of interactivity (understood as the possibility of selecting the plot) on users’ perceptions of the narrative and of the viewing experience [16, 15]. Scholars have also explored the effect of interactivity on emotions. Lee, Heeter and LaRose [16] found that interactivity had an impact on surprise and Soto-Sanfeli et al. [17] identified similar impact on the intensity of specific positive, neutral and negative emotions (interest-curiousity, surprise, fear and guilt). There is also evidence that interactivity impacts on a very sensitive and specific aspect of narrative engagement (character identification). Recent work by Soto-Sanfeli et al [22] has found that identification (the sensation of becoming the character and the cognitive-affective empathy) was significantly higher when receivers interact with the plot than when consuming a movie in a linear way. Finally, the effect of interactivity on some audience characteristics has also been investigated and...
Lee, Heeter and LaRose [16] found that the way in which an interactive narrative is consumed (solitary or co-viewing) also affected its perception. When consumed with another person, viewers paid less attention and thought less carefully about selection choices. Soto-Sanfiel et al. [23], in their first attempt to explore the relationship between interactivity and personality, reported that interactivity affected the entertainment perception in terms of consciousness. Individuals with high levels of consciousness had a positive evaluation of entertainment when selecting elements of the plot, which contrasted with a negative evaluation when consuming a linear narrative. This body of research confirms that transition from passive receivers to active ones could entail emotional, cognitive and behavioral consequences and redefines the traditional author-text-audience relationship [18, 22 and 23].

3. CONCLUSIONS
This paper focuses on providing the reader with a comprehensive literature review of relevant work towards understanding narratives and storytelling from a user’s perspective. The work presented in this paper is by no means exhaustive and constitutes a first step towards understanding what an interactive narrative experience means and identifying elements through which it could be assessed quantitatively and qualitatively.

4. ACKNOWLEDGMENTS
We would like to thank the EPSRC RIDERS Network (Grant EP/1032037/1) for funding this research.

5. REFERENCES
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