

Pulling the Strings: A Theory of Puppetry for the Gaming Experience

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ABSTRACT

In this paper we introduce the theory of puppetry to understand the gaming experience. The paper concentrates on discussing the importance of operationalising the user experience, and how puppetry can be used to do so within the videogame domain. The paper aims to bringing the experience of playing videogames closer to objective knowledge, where the experience can be assessed and falsified. Experience is defined as a two fold phenomenon: process and outcome. The theory focuses on explaining the basic elements that form the core of the process of the experience. It argues that puppetry is formed by control and ownership. The name of puppetry is introduced after discussing the similarities in the importance of experience between videogames and theatrical puppetry. Then, puppetry operationalises the gaming experience into a concept that can be assessed.

KEY WORDS

Gaming Experience, Puppetry

TOPIC

The Magic Circle

1 Introduction

The experience of playing videogames, or the gaming experience, is the topic of discussion of this paper. Here we present a theory that aims at operationalising the

concept of the gaming experience; the theory is grounded in a concept called *puppetry*. Puppetry was obtained using a bottom-up approach (Calvillo-Gómez et al., 2008), starting with narratives that reviewed videogames until a theory was formulated using different types of iterative coding mechanisms in order to find those common elements (Strauss and Corbin, 1998). In this paper instead of focusing on the methodological formulation of the theory we take a top-down approach. We present the theory and discuss the different elements that form it. Besides presenting our theory, we focus on two discussions, first, the importance of having a theory that operationalises the gaming experience; and second, the use of the theatrical concept of puppetry to describe the experience of playing videogames.

After presenting the basic definitions that will be used throughout this paper, we divide our discussion in three: first we present puppetry in the concept of theatre, the aim is to highlight the similarities that it has with videogames, in particular the idea that puppetry is defined in terms of its experience and not of its physicality. Then we present a theory of puppetry to describe the gaming experience, we do not discuss the origins of the theory, rather just the theory itself, we would argue that the experience of playing videogames is centred on the control and ownership of the player towards the videogame. The final discussion is about the importance of operationalising the concept of the gaming experience, and how puppetry takes the first steps towards this operationalisation by identifying a clear set of hypotheses grounded in latent and observable variables.

We focus on the importance of operationalising the concept of experience as we are interested both in understanding the experience and having a falsifiable theory about it. Experience is by definition a subjective term; an individual tells of the lived experience according to that person's own accounts (McCarthy and Wright, 2004). And there are no objections from us regarding that perception. However, if we are to study the concept of experience, we need to be able to operationalise it under scientific grounds. When individuals play the same videogame and have good experiences, they are able to share them among other players under a common framework of what constitutes a good gaming experience. We are looking for that common framework under which the experiences are shared; the experience might be personal, but the framework under which the experience is built is general. We write this paper under two influences, first that of our own discipline of Human Computer Interaction (HCI), second, from that of objective knowledge (Popper, 1959).

2 Basic Definitions

2.1 User Experience

User experience is a relatively new concept within Human Computer Interaction (HCI). Preece et al. (2002) define experience as how the interaction *feels* to the users. They succinctly address experience leaving it as a vague term full of subjectivity: an application taps into experience when during the interaction process factors such as fun, enjoyment, pleasure or aesthetics are influenced. This seems a typical understanding of user experience within HCI. The use of the concept “user experience” has both problems and advantages. The problem is that it means too many things. The advantage of experience is that it refers to exactly that tricky idea that we kind of know what it is, but have problems describing it. The term user experience is usually employed when interaction designers or analysts refer to a concept that goes beyond usability and looks at the relation of the user with the application (Dix, 2003) with a meta-usability perspective. Usability is how an application is implemented to let the user perform a task effectively and efficiently; the main focus is productivity, to let the user do the tasks with good quality in an optimal time and the secondary goals are user satisfaction and user preference (Bevan, 1995). As designers tried to maximise satisfaction and user preference, they started looking at something beyond usability, something that could provide the user a better experience. This meta-usability approach is one in which the user would think about the experience. It is not only about using it, but using the application to have a better experience performing the task.

2.2 Philosophy and Experience

Understanding experience as part of human life has long been the concern of different branches of philosophy. In this section we address two of the schools of philosophy that have dealt with this issue and that are of recurrent use within HCI: phenomenology and pragmatism. Phenomenology considers that “*the central structure of an experience is its intentionality, its being directed towards an object by virtue of its content or meaning together with appropriate enabling conditions*” (Zalta, 2007). Phenomenology looks at the experience beyond the sensory qualities of it and it explains the relationship that the experience has with the person. Experience in phenomenology is the relationship between individual and object, and as such should be studied. This relation of object and individual was greatly studied by Heidegger (1927). To explain this relationship he introduced

two concepts, ready-at-hand and present-at-hand. Ready-at-hand is the way we perceive tools as instruments to pursue a task, that is, the tool is invisible as long as we are able to use it. The ontology of the object depends on the use given by the individual, as the tool by itself is useless. Present-at-hand is when the individual reflects upon the tool; in other words, the individual studies the tool instead of using it. The concept of present-at-hand is not necessarily the inverse of ready-at-hand, it is true that when an object is present-at-hand, it ceases to be invisible, this might be because the tool failed to allow the task to be performed, or because the individual became interested in understanding how the tool performs. These two concepts reflect Heidegger's position against the Cartesian dualism. He defended that it is not possible to separate mind and body, as one needs the other; individuals can indeed think and be, but this is not one as a consequence of the other, but as a relationship between both of them that is reflected upon the interaction with the world. In order to understand an experience, both the object and individual are joined together either to perform a task, or to understand how the tool performs the task. Phenomenology helps us to understand how the user interacts with the task by using an object. On the other hand, pragmatism studies the practical consequence of the actions, and seeks truth from that point of view. Among the many branches of pragmatism, Dewey studied experience for education and art. Dewey was interested in how our interaction with art or education affected the future, he stated *"the quality of experience has two aspects. There is an immediate aspect of agreeableness or disagreeableness, and there is its influence upon later experiences [...]. Hence the central problem of an education based upon experience is to select the kind of present experience that live fruitfully and creatively in subsequent experiences"* (Dewey, 1997). Dewey explains that an experience can be *"mis-educative if it has the effect of arresting or distorting the growth of further experiences"* (Dewey, 1997). He defined experience as the result of the interaction of the individual with the environment at a given time. Pragmatism helps us understand how to treat the outcome of the interaction process. Both Dewey and Heidegger's concepts relate to the concept of the colloquial experience. Experience is dual; it is both a component (a phenomenological approach) and a consequence (a pragmatic approach). Whenever there is interaction, there is experience. The concept of "creating an experience" from HCI is, at best, a deceit; experience can not be created as it always exists. However, it can be influenced by acting upon the environment.

2.3 Defining User Experience

As it has been presented so far, experience is both the process and outcome of the interaction. And here we build on the theories discussed by Dourish (2001) and McCarthy and Wright (2004). During the interaction there are elements of the application, which if they are missing can eventually provide a negative experience. The outcome of experience also needs to understand the process, and to acknowledge the process of which the individual is acted upon. We start the discussion by proposing a definition of experience by modifying Dewey's own definition:

Experience is both the process and outcome of the interaction of a user with the environment at a given time.

where the environment is defined by the interactive application. It has to be noted that experience is emergent to the interaction. The definition as it stands at this moment is still quite subjective, but by looking at the process and outcome of the interaction separately, we are able to look into a more tractable concept of experience.

Having defined the approach that we are taking towards experience, we proceed now to discuss the concept of "Gaming Experience".

2.4 Gaming Experience

There have been different efforts in the past that aim at understanding this experience of playing videogames in relation with different domain. There has been a big effort to compare the experience of playing videogames with that one of reading (Aarseth, 1997; Rush, 2005; Murray, 1997; Ryan, 2002). This has generated a furious debate (Juul, 2001; Frasca, 2003) of whether games tell stories or not. We see this debate not as a matter of whether a game indeed tells stories, but as matter of understanding videogames in terms of the experience they provide.

It can be said that the objective of a videogame is to provide players with a positive experience, and Salisbury and Fields (2004) identify three phases of the experience of playing videogames: selecting the game, engaging with the game and mastering the game. Out of these three phases we concentrate in the second one, engaging with the game. We are interested in the prosaic experience of a player with the game. We do not look at why was the game selected, or how can the player master the game while becoming immersed (Brown and Cairns, 2004; Ermi and Mäyrä, 2005), present (Spagnolli and Gamberini, 2002) or in flow (Csikszentmihalyi, 1990; Sweetser and Wyeth, 2005). Neither are we interested in the

social aspect of playing videogames (Lazzaro, 2005) nor in the design process to produce a good videogame (Crawford, 1984; Hunicke et al., 2004). Our primary interest is to identify, once the player is playing, the core elements of that experience, which we called the gaming experience.

Before discussing the different elements that form the gaming experience and the theory of puppetry that encapsulates such elements, we proceed to introduce the concept of puppetry of theatre. As mentioned earlier, this is done with the aim of highlighting the similarities between puppetry and videogames. But it is also done to clarify that the meaning of puppet and puppetry goes beyond a doll attached to a set of strings.

3 Puppets, Artists & Audiences

Puppets are shadows, hands, dolls, figures and figurines. The physical representation of the puppet is eclectic, but still, we are able to recognise one when we see it. They are not puppets because of their physical characteristics, although they share a common semiotic, but because of the experience they convey.

Puppetry is understood differently depending on whether the explanation comes from the artist or the audience (Tillis, 1992). Upon the artist, the puppet is understood as a medium under his control that frees him of any responsibility, being free to act in an unreal world as the consequences are only in that world. The puppet becomes a puppet once the audience gives life to it. The audience recognises that it is indeed an object performing in front of them, but they agree to suspend their disbelief and bring life to the object so that it becomes a puppet. Tillis (1992) calls this the “double-vision” effect, seeing the object both as an object and as alive. The puppet is then defined as a “*theatrical figure perceived by an audience to be an object, that is, given design, movement and frequently, speech, so that it fulfils the audience’s desire to imagine it as having life, by creating a double vision of perception and imagination, the puppet pleasurably challenges the audience’s understanding of the relationship between object and life*” (p65) (Tillis, 1992).

We find that in videogames the player performs both the functions of the artist and the audience. The player has control over the medium, a medium unbounded by reality, while at the same time performs this double-vision allowing the game to be real. It is in this process of control and ownership that the core of the gaming experience is defined. We now proceed to discuss the theory of puppetry for the gaming experience.

4 Puppetry as a Theory for the Gaming Experience

The gaming experience is geared by the puppetry of the game. Puppetry is formed by Control, Ownership and Facilitators. Control represents the basic actions that the player takes upon the game. Ownership is when the player takes responsibility of the actions of the game, he feels them as his because they are the results of his conscious actions and the game has acknowledged these by rewarding him. Facilitators are the external factors, such as the available time to play, previous experiences, or the aesthetics of the game. Puppetry is produced when there is a high level of ownership, and ownership is achieved when the player has a high level of control over the game; if the control is low, then the facilitators have to be high to allow the player to have a sense of ownership. The game begins to be the clay which the player can use to create his own story. The way the player starts making the game his own is by first applying his own actions towards playing the game. Those actions can be used to win the game, or accomplish the player's own goals. As the game progresses, the player starts to receive different types of rewards, which can be helpful towards winning the game, or just something that the player enjoys doing. It is also an opportunity so that the player can do something alien to his reality. In order to have ownership, the player has to grasp the control of the game. There is a mechanical control that is related to how the game is implemented in the specific console, and the virtual control. Having control of the game is the first step in amalgamating the other two elements of the experience: Gameplay and Environment. The facilitators that influence puppetry are part of the subjective relationship of the player with the game. A previous experience with a similar game, the amount of time willing to play, or the aesthetic value that player can perceive from the game (See Figure 1).

We now proceed to discuss each of the members of the elements of puppetry. Control has six members clustered in two groups: mechanical and virtual. The player grasps the mechanical control when he is able to use the controllers, adjust to the actual presentation of the environment, and remembers how to use the controller. Virtual control is the interaction between the game and the outside world. Small actions are the actions that the objects that the player is manipulating can perform; it would be rotating figures in Tetris or selecting the troops in Warcraft. The goal is the objective that the game is posing to the player, and something to do is the game keeping the player occupied. In Tetris the goal is not to lose while arranging figures, and the player is kept doing something every time a figure appears, in Warcraft the goal is to conquer, and the player is kept busy while developing the settlement or scouting the land. The player moving the mouse is

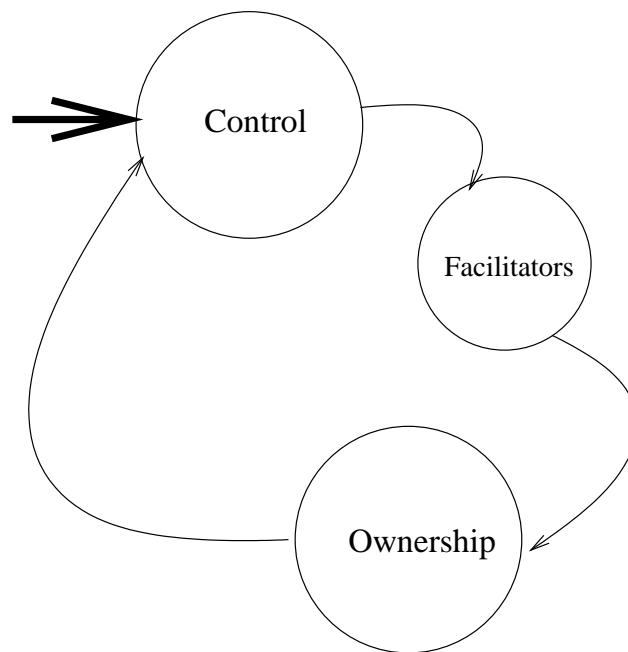


Figure 1: The process of puppetry: Good control leads to a high ownership, if the player does not have a good control, then it is still possible have high ownership if the facilitators are strong enough. The player increases the control as the ownership also increases.

mechanical control, the character rotating or moving figures forms small actions, and the synergy of those two members is what gives the player a sense of control. The player remembering the repertoire of actions and how the controller works is part of the memory. In Tetris the player may remember that he is able to rotate the figures clockwise and counter-clockwise, in Warcraft the player can remember that typing a character causes the troops regroup automatically. It is the player learning how the strings of the puppet work, and where they connect. It is also the position of the player in respect with the rest of environment, what the player sees and how responds to it. Tetris allows the player to see all of the game, Warcraft only a part of the map, and games like Doom only allow the player to see what the character of the game is seeing.

Once the player starts to grasp control of the game, it is time to place the puppet within the context of the story. It is time for the player to make the game his. Ownership has four members. Big actions are the strategies that players take

Table 1: Elements of puppetry

Elements	Members	
Control	Mechanical	Controllers Memory Point of View
	Virtual	Small Actions Goal Something to do
Facilitators	Aesthetic Value Previous Experiences Time	
Ownership	Big Actions Rewards Personal Goals You but not You	

towards accomplishing the goal. If moving the mouse so that object can rotate belongs to control, making the object rotate so that it fits in a certain place is part of the strategy — it is a big action. It is not only through strategy that the player makes the game his, it is also through personal goals. The player might not have to finish the game faster than anyone else, but it is a personal goal to do so. In Tetris it is not needed to arrange the figures so that four lines can disappear at once when the big figure appears, but players do it; in Warcraft it is not necessary to collect the most resources or discover the entire map, but the player set these personal goals. The game responds to the player's efforts by rewarding him, either by passing levels, defeating bosses, or by saving his record as the highest score or the fastest time. Then, there is catharsis of the player to do, or be someone, alien. The player becomes a murderer, a pimp, a gangster, a teddy bear, a general, or starts solving under pressure or time constraints. It is the player, but it is not. It is not the player becoming somebody else, as an actor would do, it is as a puppeteer repressing a different persona. See Table 1 for a listing of the members of puppetry.

5 Puppetry as an Operator

The objective of this paper is to present a theory that can operationalise the concept of the gaming experience. Towards this end we presented a definition of user experience and a theory that describes the basic elements of the basic elements and its relationship to produce a positive gaming experience. This is done with the objective of bringing the concept of user experience to World3 (Popper, 1997). The importance of World3 is that it is here where objective knowledge resides, the type of knowledge that allows ideas and concepts to be falsifiable and autonomous.

Puppetry proposes four clear hypotheses: The absence of puppetry leads to a poor experience; high ownership leads to high puppetry; high control leads to high ownership; and, control and high facilitators lead to ownership. Puppetry is formed by three main categories: ownership, control and facilitators. These three categories are three latent variables or constructs. They were introduced in order to explain the process of the gaming experience. The three constructs can not be observed or measured directly. However, it is possible to learn about them by observing their members (Table 1). The members of each category are indeed observable variables that can be quantified through empirical observations.

Puppetry describes the relationship between the player and the videogame. It does not measure the game or the player, but their relationship. It does so by proposing a series of falsifiable hypothesis and observable measures that bring the concept of user experience closer to the world of objective knowledge and operationalises the concept of experience.

6 Conclusions

In this paper we introduced a theory of puppetry to explain the gaming experience. We argued that the concept of experience as it stands is problematic as it hard to operationalise. To over come this, it was introduced a definition of user experience that looks at it as a two fold phenomenon: process and outcome. The process was justified as a consequence of a phenomenological interaction with the world. It is in the process where the common elements that influence the outcome creating a personal experience while allowing it to be shareable are identified.

Using the proposed definition we looked at the gaming experience. We identified the core elements of the process of the experience as control, ownership and facilitators. The theory was named puppetry as it shares several characteristics

with the theatrical puppetry. Both have to be defined in terms of the experience they produce, and not in terms of their physicality. The roles of artist and audience in the theatrical puppetry have parallels with the player. It is the player the one responsible for bringing the game to life, while giving the player the control over a medium unbounded by reality.

The theory of puppetry presents a series of falsifiable hypotheses and constructs that depend on observable variables. Future work is focused in validating our theory by measuring those observed variables using analysis of covariance structures (Nunnally and Bernstein, 1994) and latent equation modelling (Everitt, 1984).

7 Acknowledgements

The authors wish to thank Sarah Faisal, Dr. Anna Cox and Prof. Ann Blandford for valuable comments on this work. Eduardo H. Calvillo-Gómez is sponsored by SEP-PROMEP and he is a faculty member, on leave, of Universidad Politécnica de San Luis Potosi, México.

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