Understanding the Videogame Medium through Perspectives of Participation

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ABSTRACT
The videogame medium enables the player to participate in meaningful activities from which a gameplay experience emerges. The multiplicity of forms that a videogame can take associated with the subjective and holistic nature of experience challenge a comprehensive and systematic approach to design in the videogame medium. In this paper we present a conceptual model to support game design and gameplay experience evaluation built upon the notion of participation, the way players take part in gameplay activity and experience the game. The model aims to contribute to an understanding of the design space in videogame medium as well as to the evaluation of gameplay experience through six perspectives on participation: Playfulness, Challenge, Embodiment, Sociability, Sensemaking and Sensoriality. We illustrate the use of the model as a basis for analysis of videogame objects and the kinds of participation they promote.

Keywords
Game Design, Participation, Gameplay Experience, Context, Multi-mediation

INTRODUCTION
Videogames are paradigmatically distinct from interactive computing systems that perform a more utilitarian role where the focus on interaction efficiency and functionality is evident. Essentially, videogames' purpose is to promote an experience. This rationale, although obvious in a certain way, requires the adoption of conceptual instruments to enable us to rationalize the nature of the videogame medium, in a way to support a game specific view of design and evaluation activities.

Designing a videogame consists of enabling and inhibiting types of player participation according to an idealized experience (Roque 2005). When designing a game a player experience is always invoked, regardless of whether it is considered explicitly or implicitly in the designer's decision-making process. It is our basic conjecture that the explicit consideration of the participatory qualities of the gameplay experience could help orient the game design activity towards defining the design elements most capable of promoting the intended forms of participation.

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However, experience is hard to define and characterize in a formal manner, mainly because of its holistic and multi-dimensional nature (McCarthy and Wright 2004; Hassenzahl 2010). In the game studies field, gameplay experience has often been characterized through concepts like fun (Fullerton et al 2008; Lazzaro 2005), flow (Chen 2007; Csikszentmihalyi 1988) or immersion (Ermi and Mayra 2005; Calleja 2007; Thon 2008). In addition to the often ambiguous or complex definition of these concepts, their usefulness for design purposes is often questionable. Thinking about fun, flow and immersion, per se, do not help us think of the experience enabled by the videogame medium in a way which is clear, comprehensive, and generative of new design proposals.

Moreover, if on one hand the aim of a videogame object is to support an experience, on the other, the design of such an experience is not directly within the designer's reach in view of the non-deterministic nature of our relation with technology and of the subjectivity associated with the experience (Roque 2005); this challenge is compounded with the difficulty in addressing (conceiving, characterizing, evaluating, streamlining) the videogame object, mainly because of its multiple character.

The videogame medium may take multiple forms. How can we address formally and comprehensively videogames as diverse as Tetris (Pajitnov 1985), World of Warcraft (Blizzards 2005), GTAIII (RockStar 2001), FarmVille (Zinga 2009), or Angry Birds (Rovio 2009)?

We are interested in supporting the analysis of video games in a comprehensive way, beyond specific videogame genre and context of use. As a reference point, we adopt the videogame definition of Grant Tavinor (2009) for its comprehensiveness, including digital artifacts that are not limited to a ludic and structured perspective of gameplay where pursuing a goal is the basis of the gameplay experience: "X is a videogame *iff* it is an artifact in a digital visual medium, is intended primarily as an object of entertainment, and is intended to provide such entertainment through the employment of one or both of the following modes of engagement: rule-bound gameplay or interactive fiction".

From this perspective arises our motivation to refocus the issue of game design and evaluation on the perspective of player participation in the game. In this article we propose a model for supporting the design and analysis of videogames in order to achieve a rationalization between how the designer intended for the game object to promote a specific playing experience and the emerging experience as interpreted by players. This model will be further developed and presented through the characterization of forms of player participation in the game play activity.

After contextualizing this paper's contribution in the related work section, we develop the concept of player participation as the conceptual base for supporting game design and gameplay experience evaluation activities. Finally, we illustrate the use of the proposed model through its application in the analysis of different game designs.

BACKGROUND

In the text "I Have No Words & I Must Design" Greg Costikyan (2002) states that "as game designers, we need a way to analyze games, to try to understand them, and understand what works and what makes them interesting", suggesting that a critical language is needed in order to achieve that.

Game Design Models as abstract representations can provide vocabulary through sets of concepts that help to think, analyze and design games in a more structured way (Salen and Zimmerman 2005). Based on his experience as game designer, Church (2009) states that models give a way to "talk about the underlying components of a game. Instead of just saying, 'That was fun,' or 'I don't' know, that wasn't much fun', we could dissect a game into its components, and attempt to understand how these parts balance and fit together". In the essay "Formal Abstract Tools" Church (2009) proposes a potential framework taking the form of a set of "design tools". These "design tools" are modular concepts that aim to contribute to a terminology for moving the game design discussion forward, going beyond the discussion of "fun". Other diverse examples of contributions to structure game analysis and design are the MDA framework (Hunicke et al 2004), Patterns in Game Design (Bjork and Holopainen 2005), and the PLEX framework (Korhonen et al 2009).

In the context of gameplay experience evaluation, the use of gameplay metrics to track players' behavior has been receiving increasing interest (Drachen and Canossa 2009; Kim et al 2008; Tychsen and Canossa 2008). The advantages associated with this approach are related to the ability to analyze the behavior of players objectively and in great detail for as long as the entire gameplay session. The fact that this information can be processed automatically also allows tracking of a large number of players.

However, given the complexity and the volume of data that can be generated in a gameplay session, challenges arise in the interpretation of data. Moreover, the objective data does not answer how or why the players made their decisions or the emotional effect generated, so it is generally recommended to use additional evaluation approaches. The game design models referenced can contribute to a formal understanding of game design. A common feature of these models is the fact that they did not include an explicit relationship between the analysis of a game design and how to proceed with the evaluation of gameplay experience, as illustrated in (anonymous).

The model of gameplay experience that we propose aims to contribute to the practitioner's reflection-in-action all the way from the definition of design intentions, to the characterization of the videogame object, and the evaluation of player's participation in the gameplay experience.

A PARTICIPATION-CENTERED PERSPECTIVE

In this section we synthesize a conceptual basis from which the model proposed in this article develops. The contribution of this article deals with the conceptual support of the design and evaluation activities of the videogame medium. On the theoretical nature of this contribution, the proposed model develops through the synthesis of concepts that help to inform and interpret the design and the evaluation of the videogame medium. Inherent to this purpose there's the conceptualization of the game experience, how to take into account the intended game experience into the design or the game object and gameplay evaluation activities. To rationalize the game experience in a broad and informative way, for the design domain as well as for the evaluation domain, we propose, as the structuring concept of the conceptual basis which guides our contribution, the concept of participation - the way in which players take part of the game play activity. The synthesis of the conceptual basis, described in this section, develops over the participatory nature of the videogame medium and over the acknowledgement of the mediating role of the videogames in the player's participation.

The Participatory Nature of the Videogame Medium

Participation is seen as a key feature of the videogame medium (Aarseth 1997; Bogost 2007; Raessens and Goldstein 2005; Roque 2005; Salen and Zimmerman 2004). “Play is experienced through participation. When a player interacts with a game, the formal system is manifest through experiential effects.” (Salen and Zimmerman 2004). The player takes part in determining the activity. The experience emerges through actual player participation, through the interpretation of the context of the game and how the player acts in it.

In the context of digital media studies, Ian Bogost (2007) approaches the interactive quality of the videogames referring to one of Murray’s four properties of the computing medium, its participatory nature. “Procedural environments are appealing to us not just because they exhibit rule-generated behavior, but because we can induce the behavior… the primary representational property of the computer is the codified rendering of responsive behaviors. This is what is most often meant when we say.” (Murray 1998).

Concepts like participation and interactivity are some of the concepts used to characterize the distinctive qualities of the videogame medium (Raessens 2005). Though, Raessens (2005) and Aarseth (1997) argue that the Participation concept is a more precise alternative than the Interactivity concept to characterize the specificity of videogames. Laurel also criticizes the term: “The search for a definition of interactivity diverts our attention from the real issue: How can people participate as agents within representational contexts ” (Laurel 1993). The notion of participation can be useful to conceptualize the game design activity. Salen and Zimmerman (2004) define the design activity as “the process by which a designer creates a context to be encountered by a participant, from which meaning emerges.” Roque (2005) considers the design of a videogame as the creation of a special kind of context consisting of elements that promote or inhibit certain forms of participation, from which experience and meaning emerges. In order to design a videogame it is then necessary to consider how the elements composing the game medium will be translated by the player, so as to support the intended forms of participation and, consequently, the emergence of a game playing experience. From these references, we find the concept of participation to be very influential in the ideation of the gameplay experience and, consequently, in the design of games as participatory media. It is therefore relevant to further research the design activity in terms of player participation and to develop indicators of participation as essential instruments towards a more informed design.

Videogames as contexts of multi-mediation

By proposing to think of the videogame as a participatory context, we are interested in synthesizing a conceptual basis that help us to understand the nature of the elements that compose those contexts and promote different ways of participation. In that sense we propose, in this section, to frame the multi-mediating role of videogames in the players participation on the game play activity, having the Activity Theory (Engestrom 2001; Leontiev 1978; Vygotsky 1978) as a source for reflection. The Activity Theory has been used in the context of HCI to allow for the analysis of the interaction with artifacts from a cultural and historical perspective (Rogers 2012).

Activity Theory offers a conceptual framework to analyze the role of material or mental instruments mediating the relation between subjects and the object of the activity. The object of activity can be understood as the motive that gives meaning to the activity (Kaptelinin and Nardi 2009). Introducing Activity Theory on HCI studies, Bodker (1991;

Bødker and Klokmose 2011) argues that "instead of studying the relationship between the user and the computer as something that the user works on, or communicates with" she pointed out "how we may more usefully see the computer as something that the user acts through, on other objects or with other subjects—a mediator". More recently, there has been an increasing interest in the analysis of the multiplicity of mediators that structure an activity (Bertelsen and Bødker 2002; Bødker and Andersen 2005; Bødker and Klokmose 2011). Boadker and Andersen (2005) observe that real life mediations are heterogeneous and consist of a "web of mediators" connected in chains (i.e. the object of one activity becomes the mediator of the next one) or organized in levels, depending on the purpose of the activity.

We argue that the notion of multi-mediation portrays a useful concept in the analysis of the role of the videogame in the structuring of the game play activity. When we oversee the game play activity at the light of Activity Theory, we can consider the videogame as a network of mediators of diverse nature. From the designer's point of view, what matters is the understanding of how the proposed game experience, as a result of the game play activity, is promoted by the multiple mediators that compose the videogame and enable the players' participation.

Let's imagine a game scenario where we propose to the player the role of a city manager where the goal is to have the city with the best quality of life possible. Examples of mediators of this game play activity could be: the role suggested to the players; the available resources; the game space as represented; the scores or various indicators; the characters; among others. In another game scenario example would be a game where the players are invited to interact with other players through the performance of a dance. Examples of mediators of participation in this game play activity could be: the representation of the players' avatar; the model and valuation of each dance step; notions of appropriate social behavior within the game, the music; among others. These two scenarios exemplify mediators of participation in the videogame medium of a diverse nature that, naturally, promote distinct game experiences. The proposed model in this article suggests thinking about the players' participation in different perspectives thus allowing to rationalize the nature of the mediation that characterizes a videogame as medium.

PARTICIPATION-CENTERED GAMEPLAY EXPERIENCE MODEL

In this section we present an initial proposal for a model to guide the activity of game design. The model is instrumental in our attempt to address the question of: how to reframe the design of a videogame from the perspective of players' participation? This model is intended to have a guiding role, assisting the designer in considering how the player takes part in the game. To achieve that we consider six perspectives on participation: Playfulness, Challenge, Embodiment, Sensemaking, Sociability and Sensoriality (fig. 1). These dimensions seek to assist the designer in thinking, in a comprehensive manner, about the range of possibilities at her disposal to define or give a certain character to a game. The perspectives considered result from the synthesis of the literature on the nature of play activity, the conceptualization of the gameplay experience and the motivation of the players.

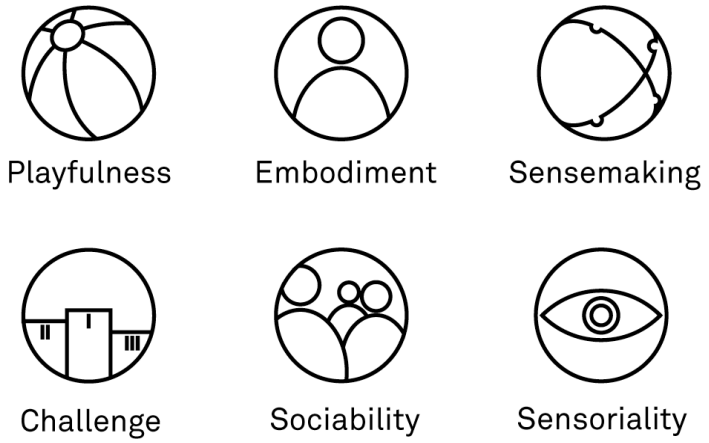

Figure 1: Six perspectives to rationalize player's participation.

We will present the references that support each perspective. The number of perspectives considered comes from the criteria used in the conceptualization of the model. This number was reduced to a minimum to ease the model appropriation and rationalization that still allowed us to approach the design of the medium and the gameplay experience in a wide and inclusive way. In turn, we expect these six forms of participation can also be used to characterize gameplay activities, so as to confront actual player participation with the intention originally set. These lenses are mostly complementary and when successfully integrated they should provide an holistic perspective. Moreover, it can be quite complex to establish a rigid boundary between these views of interaction as, often, different forms of participation share common aspects when realized in a game artifact.

With the purpose of operability of the model thus presented in the context of design activities, we identified three operative focus: defining design intentions, characterizing game artifacts and mapping and analyzing player participation. Those three focuses derive directly from the conceptual base that supports the proposition of the model centered in the concept of participation: bearing in mind that the videogame, as an artifact, mediates the players participation from which the potentially intended playing experience emerges. In the following subsections we will describe the three focuses along the six participation perspectives. In Table 1 we map the three analyses focuses and the six perspectives synthesized in the model.

Focus of analysis

Intention

The first operational level concerns Intention: What is the participation ideal that the videogame is suggesting? It is often from a design intent that the conception of a gameplay experience emerges. As already noted, we assume that a design exercise departs from a proposed experience ideal, by configuring certain forms of participation. At the intent level of operation we generate and organize the proposed forms of participation and, implicitly, the kind of experiences to be enabled. This focus analyses and rationalizes the character or style of the proposed or idealized game, meaning, the essence or value of the game activity.

	Intention	Artifact	Participation
Playfulness	exploring, discovering, recreating, customizing	the nature of a player's agency, the variety of interactive elements of the game (objects, characters, actions, etc.)	degree, variety and tendency of exploration
Challenge	overcoming a challenge, creating a strategy, defeating an opponent, mastering a skill	nature of challenges proposed, type of penalties and rewards, intensity and organization of challenges	control, pace, progress, efficiency in performing tasks
Embodiment	physical involvement, physical performance	representation of the physical game world, player's representation on the game world, interpretation of player's movement	control and rhythm of movement, aesthetics of the movement
Sensemaking	interpretation of a role, fantasy, self-expression	theme and underlying narratives, models and representations of phenomena, roles and motives, significant actions	alignment between actions and roles, understanding and or critique of the represented phenomenon
Sensoriality	contemplation, wonder	style, nature of the stimuli, visual and sonic compositions, synesthetic explorations	degree of exposure and responsiveness to stimuli, interaction or engagement with sources
Sociability	competition, cooperation, friendship, identification, recognition	diversity and nature of social interactions and relationships, models of social structures (team, hierarchy, etc)	the intensity and types of interactions between players, effectiveness bonds

Table 1: Characterizing players' participation along the three foci of analysis

Artifact

The second operational level concerns the Artifact: How does the artifact supports the idealized forms of participation? At this level we envision an object as medium that enables an interaction context calling for the intended forms of participation. In other words, we aim to align the features of the artifact with a model of player interaction supportive of the intended player participation. This focus analyses and rationalizes the artifact videogame as network of mediators that support the participation, helping us to think about the nature of the mediators used in the artifact.

Participation

Finally, the third operational level concerns Participation: What characteristics of the actual player activity are consistent with or revealing of the participation idealized? This level of operation is meant to focus observation, analysis and evaluation of actual player participation, in particular, to examine if the game activity meets the design intent, and to point towards the indicators and metrics we can define that would be revealing of progress towards that intent. This focus allows characterizing player participation, measuring the level of alignment between the real appropriation of the game by the player and the idealized.

Six Perspectives on participation

Playfulness – The videogame as a context of free, informal, and unstructured participation.

Think of the videogame as a toy with interpretative flexibility, allowing for player exploration and improvisation. Player participation is based on interaction with the game led by an intrinsic motivation. This lens is based on the concept of "paidia" (free-form, spontaneous, child-like type of play) (Caillois 1961). This perspective enables us to analyze a videogame as a context that enhances a certain kind of experiences related to activities that involves exploring, discovering, recreating, customizing, etc.

Types of mediators of participation in this perspective are for example the interactive elements that shape the possible space of interaction, such as avatars, the objectives of the physical game world, the game world itself, the game resources, etc. In this perspective the characterization of participation can be expressed by indicators such as degree, variety and tendency of exploration. Evidence for the plausibility of this lens is found in the literature in the context of player motivations – "Discovery", "Customization", "Escapism" (Yee 2006), "Easy Fun" (Lazzaro 2005); player profiles – "Explorers" (Bartle 1996); and the characterization of the gameplay experience – "Creation", "Exploration", "Discovery" (Korhonen et al 2009).

Challenge - The videogame as a context of structured participation, of a proposed challenge, or according to a formal goal.

Think of the videogame as a goal driven context, defined by rules. Player participation is assessed in terms of how relevant his performance is in overcoming the challenge, given the purpose of the game. Player performance is usually linked with the mastery of physical or mental abilities. This lens is based on formal perspectives of games, what Callois (1961) describes as "ludus" (rule-based, structured play) and "agôn" (competitive activities). This perspective enables us to analyze a videogame as a context that enhances a certain kind of experiences related to activities involving overcoming a challenge, creating a strategy, defeating an opponent, mastering a skill.

Types of mediators of participation in this perspective are for example the challenge proposed, the type of penalties and rewards, intensity and organization of challenges, etc.In this perspective the characterization of participation can be expressed by indicators such as control, pace, progress, efficiency in performing tasks. Evidence for the plausibility of this lens are found in the literature in the context of player motivations – "Advancement", "Competition" (Yee 2006), "Hard Fun" (Lazzaro 2005); player profiles

– “Achievers”, “Killers” (Bartle 1996); and the characterization of the gameplay experience – “Difficulty”, “Competition” (Korhonen et al 2009), and “challenge-based immersion” (Ermi and Mayra 2005).

Embodiment - The videogame as a context of physical participation, both virtual and actual.

Think of the videogame as a context for physical performance. Player participation is based on the physical relationship established between the player and the videogame, whether that happens through the virtualization and representation of the player’s body in the game itself, thereby projecting the player’s body in the virtual physical space of the game, or just by interpreting player movement as an interface with the game. This lens is related to “immersion in relation to the player’s embodied interaction with screen-and-speaker world, partly by providing salient somatosensory and proprioceptive support for the feeling of embodiment presence in the game world.” (Gregersen and Grodal 2009). This perspective enables us to analyze a videogame as a context that enhances a certain kind of experiences related to activities involving physical involvement and physical performance.

Types of mediators of participation in this perspective are for example the representation of the physical game world, the player's representation on the game world, the interpretation of player's movement, etc. In this perspective the characterization of participation can be expressed by indicators such as control and rhythm of movement, aesthetics of the movement. Evidence of the plausibility of this lens can be found in the literature on player motivations – “Altered States” (Lazzaro 2005); and the characterization of the gameplay experience – “Sensation” (Korhonen et al 2009), “sensory immersion” (Ermi and Mayra 2005).

Sociability – The videogame as a context of social participation, of establishing relationships between players.

Think of videogame as a context for legitimizing forms of interaction between players, of role configuration. Player participation is based on the establishment of relationships, whether of competition or cooperation, or through any another type of communication. This lens is based on the perspective of games as social systems (Klabbers 2006). This perspective enables us to analyze a videogame as a context that enhances a certain kind of experiences related to activities involving competition, cooperation, friendship, identification and recognition.

Types of mediators of participation in this perspective are for example diversity and nature of social interactions and relationships, models of social structures (team, hierarchy, etc). In this perspective the characterization of participation can be expressed by indicators such as the intensity and types of interactions between players, affective bonds. Evidence for the plausibility of this lens can be found in literature on the context of player motivations – “Socializing”, “Relationship”, “Teamwork” (Yee 2006), “The People Factor” (Lazzaro 2005); player profiles – “Socializers” (Bartle 1996); and the characterization of the gameplay experience – “Camaraderie” (Korhonen et al 2009).

Sensemaking - The videogame as a context of significant participation, of creation of meaning.

Think of the videogame as a means of expression. Player participation is based on interpreting and acting on the semantic space represented in the videogame. This lens is

related to the "significant function" of play phenomena (Huizinga 2003). This perspective enables us to analyze a videogame as a context that enhances a certain kind of experiences related to activities involving the interpretation of a role, fantasy, self-expression, etc.

Types of mediators of participation in this perspective are for example the theme and underlying narratives, models and representations of phenomena, roles and motives, significant actions, etc. In this perspective the characterization of participation can be expressed by indicators such as the alignment between actions and roles, understanding and or critique of the represented phenomenon. Evidence for the plausibility of this lens can be found in the literature in the context of player motivations – "Role-Playing" (Yee 2006), "Easy Fun" (Lazzaro 2005); and the characterization of the gameplay experience – "Simulation", "Fantasy" (Korhonen et al 2009), "imaginative immersion" (Ermi and Mayra 2005).

Sensoriality – The videogame as a context of multisensory involvement.

Think of the game as a source of stimulation for the senses. Player participation is then based on engaging in perception, filtering, acceptance or reproduction of a stimulus. This lens is grounded on the sensorial dimension of an experience (McCarthy and Wright 2004) and is strongly related to Embodiment lens. We decided to include two different lenses because they put in perspective different characteristics of the artifact: space and movement (Embodiment), and style and atmosphere (Sensoriality). This perspective enables us to analyze a videogame as a context that enhances a certain kind of experiences related to activities involving contemplation and wondering.

Types of mediators of participation in this perspective are for example the videogame style, the nature of the stimuli, the visual and sonic compositions, the synesthetic explorations, etc. In this perspective the characterization of participation can be expressed by indicators such as the degree of exposure and responsiveness to stimuli, interaction or engagement with sources. Evidence of the plausibility of this lens can be found in the literature on player motivations – "Altered States" (Lazzaro 2005); and the characterization of the gameplay experience – "Sensation" (Korhonen et al 2009), "sensory immersion" (Ermi and Mayra 2005).

GAME DESIGN CASES ANALYSIS

In this section we illustrate the use of the model presented in analyzing the design of different videogames. For each perspective on participation we have selected a videogame which we find representative of a gameplay experience accentuating that particular form of participation. For each game we will also describe how its structural characteristics supports or promotes each form of participation.

The Playfulness in Noby Noby Boy

Noby Noby Boy (Namco Bandai 2009) is a videogame in which the player has the opportunity to control a worm-like character exploring the virtual world of the game, interacting with numerous elements. The playfulness of this game consists in the freewill and unstructured invitation to player action bringing out his creativeness through the serendipitous interactions of the character he controls. The videogame purpose is not to pursue an objective but to explore and discover the space of possibilities. The player controls the head and the tail of the worm independently changing its size accordingly. As a character increases his size and moves within the game world, the player has the possibility to indirectly interact with the elements of the gameworld. The elements of the

game world can be stationary such as houses and poles or characters such as animals, humans or surreal creatures. The space of possibilities for interaction is defined by the combination of different elements of the game world. The elements of each game world are randomly generated contributing to the diversity of interactive scenarios.

The Challenge in Pong

Pong (Atari 1972), one of the first videogames ever created, consists in the simulation of table tennis. The player controls a paddle representation that moves vertically and tries to beat the opponent. The gameplay experience emerges from a form of participation structured around the pursuit of the goal of the game. Challenge is thus prevalent in Pong, even if sociability can also be present as a by-product of gaming encounters. The goal is thus a key feature in challenge as a form of participation. The simplicity of Pong makes it even more evident as the game is striped of anything not related with the aim of trying to defeat your opponent in the simulation of table tennis. The player moves his paddle to send the ball to the opponent. The nature of the challenge is therefore to physically coordinate the racket with the ball. Another dominant feature in the challenge perspective is the valorization the players' performance, which is supported by displaying a numeric score.

The Embodiment in Wii Sports

Wii Sports (Nintendo 2006) was one of the first games for the Nintendo Wii console - a collection of five sports simulators (tennis, baseball, bowling, golf, and boxing). This videogame stresses physical activity as the essential bond between player and game, which is achieved with movement sensors. Consistent with a stronger focus on the embodiment perspective, the gameplay experience in this videogame emerges from the physical performance held by players. One of the key game features that support embodiment is the representation of the player's avatar in the game world. In this videogame, the game world is represented through mimicry of the sports' real scenarios. The representation of the players is performed using avatars, which mimic the approximate movement of the players. Dance games also rely strongly on a sense of embodiment, more frequently through mimicry of movement characteristics, but that can also be accepted by players as an aesthetic performance, resulting in an experience often with some notes of sociability.

The Sensemaking in September 12th

September 12th (Newsgaming, 2003) is a simple concept game of simulation, reminiscent of the "War of Terrorism" with a representation inspired in the Middle Eastern townscape. The gameplay experience emerges from the meaningful exploration of the simulated context. No instructions or goals are communicated, and interpretations rely on the prayer's perception and attribution of meaning and motives to the actions being represented. Sensemaking as a form of participation is strongly influenced by game features such as the representation of the game world, the role proposed to player and the action space available. The semantic context is set in this game by representing stereotypical inhabitants of an anonymous city in the Middle East. This scenario consists of buildings and people (presumably terrorists among civilians, adults, children and pets) who roam the city streets. The proposed role of the player is to manipulate a crosshair and shoot missiles against the city, making it virtually impossible to kill "terrorists" without killing "civilians". A frequent interpretation of the action as represented: when a civilian dies, other civilians cry and turn into terrorists, resulting in an ever increasing number of terrorists. As a sensemaking proposal the player is invited to interpret and reflect on the evolving situation.

The Sensoriality in Flower

Flower (Thatgamecompany 2009) is a video game that proposes a sensory experience avoiding stressing a goal. The authors describe it as a "video game version of a poem, exploiting the tension between urban bustle and natural serenity." In Flower participation is mainly guided and supported by the sources of sensory stimuli combining graphics and sound representations. The player controls the wind that blows a flower petal, which may determine its fate. There are six levels of gameplay. In each level there are other flowers by which the player can interact with. When the petal in the wind which the player controls passes through other flowers, a sensorial reward occurs though visual and sound kinestesia, raising a greater number of petals in the air. The higher the number of petals the greater the speed at which they move. The music is dynamically adjusted according to changes in the game world further enhancing the perception and invitation to wonder and contemplate the audiovisual stimuli.

The Sociability in the Endless Forest

The Endless Forest (Tale of Tales 2005) is a multiplayer online work in which the player assumes the role of a deer in a forest where there are apparently no goals. The sociability perspective in the gameplay experience resides in the interaction between the players with the particularity of the videogame not supporting audio or text communication between players but only through interactions whose encoding/decoding has yet to be negotiated. The main features that support sociability in this game are those that allow players to communicate, which in this case occurred by body language and manifestation of sounds. Players can also customize their appearance but unable to do so alone, having to ask for collaboration from other players. In the perspective of sociability, participation in this game is still supported by social activities such as dancing and hide and seek.

FINAL REMARKS

It this paper we presented a participation-centred gameplay experience model that aims to contribute to a rationalization of the design space of videogame medium as well as the evaluation of gameplay experience, along the perspectives on player's participation: Playfulness, Challenge, Embodiment, Sociability, Sensemaking and Sensoriality. Through the rationalization of player's participation in different perspectives, it was possible to analyze diverse game designs. We used individual analyses with the specific intention to illustrate the perspectives represented in the model with the purpose of facilitating the communication and the interpretation of the model. Nevertheless, more work will be required to make it more clear how the complementarity of these six model perspectives can help to understand the experience resulting from the interaction with more complex game designs. In this article we approached mainly the analyses of design cases in which we identified the main features of a videogame for one principal perspective. With this model proposal we also aim to contribute to the support of the design of player's participation. Future work is required focus on game design rehearsals where we can experiment with participation indicators and metrics, exploring the various perspectives proposed in the model. Exploring a variety of game designs can allow us to assess the extent to which participation goals and metrics shed light on the gaming experience and what are the most relevant indicators in each design situation. If on one hand the metrics' lack of context, especially when it comes to interpretation and emotional impact of the videogame artifact, is taken as a limitation from this type of experience evaluation approach, on the other hand we expect to be able to map behaviours more revealing of the game's context for each intended gaming experience.

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