Towards Gameplay Experience Metrics Centered on Player Participation
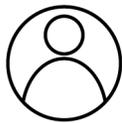
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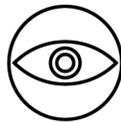lir@dei.uc.pt

Playfulness   Embodiment   Sensemaking

Challenge   Sociability   Sensory Stimulation

Abstract

In this paper we present our efforts towards a game design and evaluation model centered on the concept of participation. The way players take part in gameplay activity, from which gameplay experience emerges, is at the core of the variety of experiences enabled by the videogame medium. These pose a challenge: to develop participation-centred gameplay indicators and metrics to guide game design and evaluation activities in a comprehensive manner. Our work aims to contribute to an informed game design process by focusing on the participation of players as the main concern for intent definition and pursuit of gameplay experience goals; for the characterization of the videogame object; and for defining indicators and metrics for the evaluation of the player experience.

Author Keywords

Game Design, Gameplay Experience Evaluation, Player Participation

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

General Terms

Design, Human Factors, Theory.

Introduction

Gameplay Experience is the ultimate goal of playing a videogame. Designing a videogame consists of enabling and inhibiting types of player participation according to an idealized experience [13]. When designing a game a user experience is always invoqued, 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 play experience could help oriented the game design activity towards defining the design elements most capable of enabling the intended forms of participation.

However, experience is hard to define and characterize in a formal manner because of its holistic and multi-dimensional nature [11][8]. In the game studies field, gameplay experience has often been characterized through concepts like fun [10][7], flow [5][3][17] or immersion [6][18]. In addition to the often ambiguous definition of these concepts, their usefulness for design purposes is questionable, at least in the sense that they do not allow us to think of the experience enabled by the videogame medium in a way which is both clear, comprehensive, and generative of new experiences.

Ever since Crawford [4], game design authors have dedicated effort at defining the nature of games (e.g. [14][15]), resorting primarily to the synthesis of key features provided by other authors (e.g. [9][2][16]). This need arises from the persistent ambiguity of what we mean by game, which makes it hard to analyze the experience with such artifacts in a systematic and comprehensive way.

Participation

Thus, if on the one hand the aim of a videogame object is to support an experience, on the other hand, the design of this 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 [13]; this challenge is compounded with the difficulty in addressing (characterizing, thinking, streamlining) the videogame, mainly because of its multiple character. From this perspective arises the motivation to refocus the issue of game design and evaluation on the perspective of player participation in the game.

In [13b] we proposed an initial model aimed at supporting the design and analysis of videogames in order to achieve a rationalization between what the designer intended the playing experience to be and the experience potentially achieved, as interpreted by players. This model will be further developed through the characterization of forms of player participation in the game play activity.

In this work we depart from the following notion: "Play is experienced through participation. When a player interacts with a game, the formal system is manifest through experiential effects." [14] Participation is seen as a key feature of the videogame medium [1][12]. 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 [13b] we provide an overview of the background relevant to the concept of participation in the framework of the game, of the videogame artifact, and of the design of the artifact.

Participation-centric Design Model

"Design is the process by which a designer creates a context to be encountered by a participant, from which meaning emerges." [14] We consider the design of a videogame as the creation of a special kind of context [13]. This context consists of elements that promote and 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, a game playing experience. Thus, we find that the concept of participation to be closely related to the gameplay experience and consequently to the design of games as participatory media.

With this aim we've considered three operational focci: a) **Intent**: What is the participation ideal that the videogame is suggesting? b) **Artifact**: How does the artifact supports the idealized forms of participation? c) **Participation**: What characteristics of the actual player participation are consistent with or revealing of the participation idealized?

	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, affectiveness bonds

Table 1. A Model Proposal for Participation-centered Game Experience Design [13b]

Current and Future Work

In [13b] paper we present a preliminary version of a model to guide game design and experience evaluation activities. The model is a step to build methodological instruments for game design and gameplay experience evaluation. Having outlined the basic structure, the model is being tested with support instruments, evaluated based on actual design cases, and improved through iterations. For the evaluation of the model we are analyzing if the six perspectives are adequate to comprehensively characterize participation. To that end our current major concern is how to observe/measure player's participation in gameplay contexts. To that end we are developing gameplay indicators and metrics based on the participation lenses.

The Authors

Luís Lucas Pereira and Licínio Roque were involved in game design research and teaching, conducted several game design exercices in diverse contexts, including "serious games". For their participation in the workshop they draw on analysis of experience from design cases.

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