



HAL
open science

Huge Balls: An exploration of the comprehension of ludonarrative elements of a game art installation

Guofan Xiong, Daniel Plata, Chu-Yin Chen

► **To cite this version:**

Guofan Xiong, Daniel Plata, Chu-Yin Chen. Huge Balls: An exploration of the comprehension of ludonarrative elements of a game art installation. *EAI Endorsed Transactions on Creative Technologies*, 2019, 6 (21), pp.163214. 10.4108/eai.13-7-2018.163214 . hal-04353167

HAL Id: hal-04353167

<https://univ-paris8.hal.science/hal-04353167>

Submitted on 19 Dec 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution 4.0 International License

Huge Balls: An exploration of the comprehension of ludo-narrative elements of a game art installation

Guofan XIONG¹, Daniel PLATA²

and Chu-Yin CHEN³

¹ Ph.D. Student - INREV (Image Numérique et Réalité Virtuelle) research group of lab. AIAC (Arts des Images et Art Contemporain), under the Doctoral Supervision of Chu-Yin CHEN, University Paris 8, 93526 Saint-Denis, France. EnsadLab (Art & Design Research Laboratory at Ensad), Paris École nationale supérieure des Arts Décoratifs 75240 Paris, France

² Ph.D. Student - LabSIC (Laboratoire Sciences de l'Information et de la Communication), under the Doctoral Supervision of Pierre Moeglin - University Paris 13, 93430 Villetaneuse, France

³ INREV (Image Numérique et Réalité Virtuelle) research group of lab. AIAC (Arts des Images et Art Contemporain), University Paris 8, 93526 Saint-Denis, France

guofanx@gmail.com – maledop@gmail.com

Abstract. *Huge balls* (see Fig. 1). is a game art project created by Group Jean-Luc¹ supported by Ensadlab for the exhibition *Jonglopolis* at the Carreau du Temple in Paris 2018. The general idea is to transform juggling movements into an artistic digital installation with conceptual gameplay in it. Maintaining balance while being disturbed by the distractions inside the game space is the heart of the gameplay's mechanics, and looking to further question our understanding of gameplay. How are the visuals and the rules of this game art perceived by the players? How the players' own experiences and backgrounds alter them? How can artists use those elements to play with players/visitors? How the installation piece invites the players to perform, just like juggling as a form of performance? (see Fig. 1)

Keywords: Interactive Art, Games, Interactivity, Game Art, Ludo-narrative, Gameplay, Visual Vocabularies.

¹ A game art group based in Paris, composed of three artists/researchers of EnsadLab (Art & Design Research Laboratory at Ensad): Daniel Pata, Pierre emm and Guofan Xiong.



Fig 1. Huge balls in the exhibition Jonglopolis at the Carreau du Temple in Paris in 2018.

1 The strategies

1.1 Method

In this installation, we use the rules-based video game system as artistic materials to create an installation that provides a strange ludic experience yet with a façade of familiarity. Furthermore, we are hoping to deconstruct its conventional form to question our understanding of the video game medium, taking into account Upton's remarks about the importance of the players' background:

The game design is structuring a total experience (both rules and fantasy) that will coax the player toward adopting an interesting set of internal constraints, and what the internal constraints a player adopts will depend heavily on his conceptual background. The rules here are the game's inner framework of the restrictions and affordances, and the fantasy is the pleasing "wrapper." [1]

For achieving this experimentation, we decide to reverse the inducing and to isolate the rules/play (the juggling) and the fantasy (the visuals and the interfaces) to make it difficult for the players to adopt concrete internal constraints. Thus they cannot depend

on their conceptual background to give sense to the play and further question their understanding of the installation.

The installation gives a little control over the balancing game, but completely free on how to play and what is the game. It constantly demands its players to adapt and remaining open on to the concept of play. The idea is to de-familiarize and estrange us from reality so that the players struggle to resituate themselves within it. The more they believe that language, stories, and narrative patterns determine the perception of reality (instead of believing that they determined by reality), the more this strategy works.[2] In other words, the installation tries to deform the reality created by the video game system and its narratives and makes them visible and unnatural to the players.

For the players to have easy access and take part in, the game gives had a simple goal and is developed to jump right into the action without any kind of tutorials. The narrative elements inside of this game art project will function on the contrary as the wrappers of the rules; their existence will be a constant reminder of the players, the unnatural existence of the rules in the real world and how the wrappers affect our understanding of the actions that we do in the game world. All those discussions allow us to see further how can we use those elements to construct understanding in the players' minds and how they can create their knowledge by playing this game project.

1.2 Virtual and play

To archive these goals, the interactions will lead players to experience the virtual environment thus construct an understanding by themselves.

Video games create a virtual reality in which the individual plays the game. Virtual reality is understood as an environment that is created by a computer or any other media and within which the user has a feeling of being present in the environment [3]. If the feeling of reality is an illusion, then we have to play. We play it to explore, to learn about ourselves and the reality we created. Because the action of the playing is both creative and expressive, it is both a way of being inside the world (virtual or real) and a way of creating sense of it.

This installation fosters spontaneous body movements. The decision is aimed to make the action of its players performative and immersive. Within the safe space (or magic circle) [4] of play, this digital art installation also uses some strategies of the video game design to extend its fictional reality created by the technologies. At the same time, the physical interfaces transfer the movements and sensations of its player into virtual reaction within the digital space which gives them an illusionary feeling of being in control. As this work heavily depends on its visitors to carry out its artistic experiences, can we doubt the artists' role and the visitors within the virtual space, and we can question the illusion of being in control in virtual and in reality?

1.3 Game art

In our project, the game art is, at the same time, digital installation and also a standalone video game that uses the gameplay as materials of expression inspired by the rule-based system and it has a complete play goal and a ludic side. It is an interactive installation invite to play and invite to explore without the restrictions on serious subjects

On one hand, game art opens up the experiences of gameplay and extends the way videogame forms its culture. The game art is free from the framework of video game and its conventional definition; it allows us to blend video game with other artistic mediums, and to explore and create different kinds of expressions. On the other hand, game art gives us two advantages on the exploration of the context of gameplay. One is the direct reaction of the player that shows us how they perceive the game. The other one is the possibility of presenting this project before the public that is not familiar with videogame medium or digital art, and invite them to explore.

2 The gameplay

2.1 Rules

In this game art installation, the gameplay is simple. The player tries to touch two pink balls with a balanced rhythm, just like juggling, to control a star icon that moves across the screen, leaving a trace of pinky cream on its path. When the icons of fruits and sweets touch the trace, they get covered with cream; at the same time, the player gains one point. If an icon of fruit or sweet falls out of the screen without having interaction with the traces, the player will lose a point, and the screen will begin to get covered by semi-transparent cream. When the cream covers the whole screen, the game is over (see Fig. 2).



Fig 2. Huge balls version.2 in the exhibition Malakoniarof in Malakoff, 2018.

2.2 Playing with the players/visitors

During the development, we decided to have relatively simple gameplay but a much more complex visual presentation to play with the perceptions of the players/visitors. To add the narrative complexity in terms of player/visitors interpretations, we chose sexting emoticons² as they have at the same time basic shapes and colors, and the familiarity of nowadays emojis. Meanwhile, the specific use of certain icons and pairing present sexual subtexts that can be decoded only by those who are familiarized with the grammar of this new language (see Fig 3).

² A representation of a facial expression such as a smile or frown, formed by various combinations of keyboard characters and used to convey the writer's feelings or intended tone.



Fig 3. The visual elements inside *Huge balls*.

To push this idea further, we decided to explore the double sense inside the installation with its physical interface. In the eye of the adults, those two balls-like controllers constantly give them strong hints to connect those elements (both visual and tactile) with sexual representations within their own experiences, thus completely ignoring that the gameplay is about juggling. While for kids, the controllers have been positioned relatively high to block their vision, forcing them to peep through the controllers to play the already visually confusing game (see Fig 4). For them, the gameplay is about finding a balance to continue the game and to get a higher score.



Fig 4. The installation of *Huge balls* version.2 in Malakoniarof 2018

In another aspect, the game aims to challenge the perception of the public and evoke different kinds of reactions. Through the visuals and its difficult control system, the game usually provides an awkward situation for the players to question their own understandings and their skills of playing. The feedback of different groups of people who create their own ways of playing, like an emerging gameplay, is the most interesting part of this installation. The players are, at same time, performers, as they interact and exchange with the waiting players and other visitors that are passing by; they create their narratives and own meanings of the game, as they share their stories and game experiences with the public around them.

3 The design of gameplay

3.1 How the installation piece invites the players to perform, just like juggling as a form of performance?

The game art invites its players to try and play with the installation like a game without any serious consequence of performance (winning, losing, right or wrong). It presents an experience without deeper meaning or demanding an understanding of the narrative, the players take their action to explore the gameplay with their bodies, thus rendering the game closer to a *playing* experience and farther from *game* experience. At the same time, as players became performers, sharing the experiences and the emotions with the visitors around, inviting the audience to keep playing the game, reinvigorating the cycle spectator-performance.

3.2 How can artists use those elements to play with players/visitors?

In-game art, the design of the rules are heavily linked with the context of the installation, the cultural and the physical. And at the same time, the rules are the formal instruments that allow the creation and shared identification of the context of the play. Well-designed gameplay can introduce ideas or structures that un-familiar within the understanding of the players. As the context itself is complicated matters depends on the real-world situation, how to balance the way between all the elements in the game art project is the key to create artistic expression.

We aim to create an installation that demands the players create their narrative on the meaning of the gameplay, thus to make a discussion on the elements in the game art project that can provoke the construction of meaning in the perspective of the players/visitors.

4 Understanding a game

4.1 Understanding the play

Most of the time, when we talk about understanding a game is to understand its rules. The idea is not to remember every single rule in the game but to create *internalized constraints*³ [5] that are sufficient enough to let the players play the game. And the understanding of the game can vary from players to players. As Parlett indicated:

The totality of rules of all but simplest games are not exactly a cloud of unknowing, but could be described as a cloud of fuzzy knowing. [6]

But the cloud of fuzzy knowing can give us an idea of what the game is and what the game is about.

For a video game, the situation is more complex. Because not only the rules are not written in natural language and always hidden from the players. For this reason, they have to play the game to understand how the game works, thus understanding the meaning of the game. Except for the rules, there are a lot of other elements function in the game space, these elements usually work as guidance for helping the player to construct internal constraints thus allow them to play it. Or they bring many more meanings to the game more than what the rules can tell.

For discussing this subject, we decided to create visual and audio elements that much more pronounced than its simple gameplay that should be understandable by the majority of the players. When they play the game or watch others play, they should have a comprehension of what the game is base on their way of perceiving pieces of information. Is it by experiencing the game, by reading the subtext of the visuals, by the reaction of others or something more personal, or are they the so-called 云玩家 *Cloud Gamer*⁴ who define a game by perceiving the experiences of others without even play the game themselves?

4.2 Shared experience

When we human play (aside from the occasional game of solitaire), we play together...When playing together, you and your fellow players take in-game actions that have real consequences for one another's moment-to-moment experience, as

³ "Internalizing external constraints." The idea is that as we learn to play a game we take rules that are part of the external constraint set (constraints imposed by outside force) and construct internal analogues of them.

⁴ 云玩家(Yunwanjia or Cloud Gamer) is a Chinese Internet slang. It refers to the people who judge or critique a video game by watching others play, but never play themselves.

well as consequences for one another's in-game virtual bodies and selves. Thus for us games provide us with opportunities for both sociability and social play.[7]

Even though as a portrait by the media today, gamers seem always to play alone before their digital screens.

Video games have had a certain social spectating element to them from their inception. In the early days of arcade games, people would gather around the person playing the game to see how they were doing and to cheer them on. [8]

Or later the development of LAN based or online multi-player games still encourage share videogame experiences. The social aspect of play has a deep meaning in the experiences of play even when playing a single-player game alone. We share our experiences on forums or other social media, we watch other players play on live steaming such as Twitch, and we shared game experiences and studies on gaming journals or the channel of Youtubers. All the information and experiences we shared profoundly affect how we perceive the game and how the general public has received the game. The shared experience becomes one of the essential traits of video game consumption, which differs from other cultural industries' products. Even if games respond to the legitimation chain, in which the public perception of worth determines the value[9], the shared experience of video games is built upon an asymmetrical experience, from the players, and the audience as well.

In this project, we intend to create a social play similar that based on the interpretation of the meaning and the rules of the game. The installation is trying to imitate an arcade game but in a situation completely different. While we committed to the form of arcade games, they are inspired by *complicit formal*⁵ artists and dedicated to investigating and demonstrating the techno-cultural context that shapes the interpretation of form, [10] or in other words the understanding of video games medium as a whole. We create the project with conflicting senses and various strategies (for example, presenting visuals of sexual subtexts in a family-friendly and artistic space.) to discuss our understandings of the videogame as a medium. At the same time, it discomforts players/visitors when they are searching the meaning of the game and show them the ubiquity of information that exists in our daily life that distorts our view of a medium rather than experience it by ourselves.

⁵ The complicit formal avant-garde does not advance specific mediums. On the contrary, it questions whether videogames or any other art medium (painting, film, video, and so on) are indeed unique mediums... Complicit formal artists still pursue art for art's sake, yet are mischievously liberal and humorous in what they consider to be art, because they have learned from the failures and successes of the historical avant-garde. (Schrank, B. Bolter, D, J.: *Avant-Garde Videogames: Playing with Technoculture*, pp.23)

5 The exploration

First, we are interested in the creation of visual vocabularies anchored in the evolution of technology and methods of communication that have become both understood by a broader population, across countries and languages; and also complex by the redesignation of icons and meanings, like a new grammar.

As a starting point, we examined the example of the Isotype⁶ language, born from the industrial and economic revolution of the early 20th century, from the need to create a system of communication that could be quickly recognizable in a globalizing world. In its visual Autobiography *From hieroglyphics to Isotype*, Otto Neurath's mentions his intention of creating this system for helping workers (the broader public) to become aware of the economic reality.[11] In our project, the exploration of visual vocabularies is an attempt to help people to be aware of the reality of the techno-culture today.

Second, we question the relationship between the body and the machine through the exploration of possible and meaningful interactions. On one side, we look to explore the way interfaces aim to handle the functional and technical requirements of the game. On the other side, we aim to visualize the impact of the interfaces on the body and how the interface configures the exchange game-user-game.

The design of stressless, enjoyable, or even invisible interfaces has been the discipline ideal for decades. Interfaces have aimed to create versatile exchanges of dialogues between computers and users, particularly in the case of games, for which the effectiveness of the interface is not judged by the effortless operation, but quite the opposite, as acknowledged by Don Norman [12]. For video games, interfaces have merged into the artistic practice as our interaction with the technology become more complex, and our desire to immerse ourselves in virtual space grows.[13] This game art presents an interesting opportunity to experiment this kind of dialogue and help us to learn to control the artificial body inside the virtual space, at the same time, it tears up the disguise of the surface presentations to show us the discomfort distance between our body and the virtual game space.

Finally, we want to explore video game reception and preconceived ideas, in general, but also the public response and its reactions towards mature themes, particularly hidden by colorful and family-friendly visual and sound codes.

In a study of NYU School of Medicine in 2018 argues that humans recognize what they are looking at by combining current sensory stimuli with comparisons to images stored in memory. [14] For this reason, our perception of information is influenced more by

⁶ Isotype (International System of Typographic Picture Education) is a method of showing social, technological, biological, and historical connections in pictorial form. It consists of a set of standardized and abstracted pictorial symbols to represent social-scientific data with specific guidelines on how to combine the identical figures using serial repetition.

past experiences than by newly arriving sensory input from the eyes. Is this how we understand the videogame's gameplay? How much the media and technologies around us altered our perception of the world, and how can we find the meanings hide behind the visual presentations?

To discuss the precedent questions, *Huge Balls* focalized on the visual language of emoticons, especially to sexting dynamics, because we consider it has stabilized, with a grammar that allows communicating efficiently in a complex array of meaning where the connotation is far more important than the denotation. The visual treatment of the icons and its selection responds to the third interest, a joyful and family-friendly game that plays around the ambiguity of reading and the interpretation of public, supported heavily in the connotation process. The visual approach is reinforced by the sound design, re-signifying familiar sounds like the ice cream car's melodies. The gameplay proposed by the game look to address the user-game questions. The game is played by interacting with the balls; the juggling in the physical interface corresponds to the virtual space. The players have to move the balls to interact with the objects present in the screen; the result of the interaction forces the body of the gamer to adapt uncomfortable positions. The size of the exhibition plays around the concept of *mise-en-scène* of gamers, aiming to expand the game to a multidimensional experience, not limited to visuals, and sound, but also related to touch and the social aspect of gaming.

References

1. Upton, B.: *The Aesthetic of Play*. 1st edn , pp.36. The MIT Press, Cambridge, Massachusetts (2015).
2. Schrank, B. Bolter, D, J.: *Avant-Garde Videogames: Playing with Technoculture*, 1st edn , pp.157-160. The MIT Press, Cambridge, Massachusetts (2014).
3. Biocca, F.: Communication Within Virtual Reality: Creating a Space for Research. *Journal of Communication*, Volume 42, Issue 4, pp.5-22. Chapel Hill, North Carolina (1992).
4. Huizinga, J.: *HOMO LUDEN : Essai sur la fonction sociale du jeu*, 2nd edn, Gallimard, Paris (1988).
5. Upton, B.: *The Aesthetic of Play*. 1st edn , pp.119. The MIT Press, Cambridge, Massachusetts (2015).
6. Parlett, David.: (2005). *RULES OK or: Hoyle on troubled waters*. <https://www.parlettgames.uk/gamester/rulesOK.html>, accessed 2019/12/15.
7. Isbister, Katherine.: *How Games Move Us: emotion by design*, 1st edn , pp.43-45. The MIT Press, Cambridge, Massachusetts (2016).
8. Sjöblom, Max. Hamari, Juho.: *Why do people watch others play video games? An empirical study on the motivations of Twitch users*. *Computers in Human Behavior*, Elsevier, Amsterdam (2016).
9. Bouquillion, P. Combès, Y.: *Diversité et industries culturelles*, 1st edn , pp. 245-246. Harmattan, Paris (2011)

10. Schrank, B. Bolter, D, J.: *Avant-Garde Videogames: Playing with Technoculture*, 1st edn , pp.85-86. The MIT Press, Cambridge, Massachusetts (2014).
11. Neurath, O.: *From Hieroglyphics to Isotype: A Visual Autobiography*, 1st edn, pp. 5-8, Hyphen Press, London (2010)
12. Norman, D. (2004). *JND.org*. http://www.jnd.org/dn.mss/affordances_and.html, last accessed 2019/07/05.
13. Control Conference, <https://controlconference.com/>, A Brief History of UI in Video Games, November 29, 2017 <https://www.youtube.com/watch?v=sngq9MWraKs>, last accessed 2019/07/06
14. ScienceDaily, Past experiences shape what we see more than what we are looking at now, July 31, 2018, <https://www.sciencedaily.com/releases/2018/07/180731104224.htm>, last accessed 2019/07/05.