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Creative possibilities of repetition in videogame aesthetics

Abstract

Videogame designers combine variable elements such as goals and challenges with repetitive ones ranging from props and textures recurrently used to mechanics that make the player perform the same actions time and again. Despite the importance of repetitive factors to provide for a consistent game experience, repetition can be treated as a symptom of a deficient design by researchers and creators. The primary goal of this paper is to make a point of the importance of repetition in videogame design to help both to study further this aspect of this medium and to offer new insights for game creators. To do so, we first provide a list of some of the most common forms of repetition in which players engage while they play. We also analyze three case studies of games that have made use of repetition as a key element of their mechanics to introduce key features and nuances.

Keywords
Gameplay, Design, Repetition

1. *Repetition: a key feature of game*

There is an interesting paradox relating to the *déjà vu* we feel when we start a new game in a trendy First Person Shooter where we aim and shoot the same way we do in titles from rival companies. It is also related to that familiar feeling we have when we suspect that some item-collection side quests in role-play games have enormously similar structures. That paradox can also be found when we experience that so Freudian, uncanny feeling that arises once we realize that we have seen the same portrait hanging on the wall three or four times, or the same old, rusty clock in different houses, or identical rocks or leaves along our journeys. It is even worse to face those ominous *Doppelgängers*, two, three or even more clone Non-Playable-Characters

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(NPC), sporting the same hairstyle, voice and gaze in different towns or regions. Although it can be seen as a contradiction, videogame developers build singular universes and weave unique stories following design principles based on repetition as a key process that works at different levels.

During this study, I will try to shed some light on repetition regarded as a core ingredient in videogame design that can be useful as a starting point not only for the development of new titles but also for rethinking philosophical ideas or cultural topics such as the experience of boredom in modern Western societies. Thus, the main goal is to make aware of this dimension of games that is commonly overlooked or even regarded with disdain. To do so, I start distinguishing between forms of cultural reconsumption and the embedding of repetition in the ludic core of video games. Then I present a brief review of the literature on this topic. However, there is not yet a solid background of work about the role of repetition in videogames, but creators and scholars are aware of this phenomenon, and there are insights worth of deep reflection. Next, I will describe four different forms in which repetition appear in videogames. My intention is not to provide an exhaustive typology but to summarize the most common ways in which we, as players, engage in repetitive processes in videogames. Finally, I will analyze three case studies that go beyond typical uses of repetition in game design to explore it in a more creative way.

2. *The complexity of repetition in video games. A topic rarely studied*

Not only players of games repeat processes and experiences. Re-reading a book, watching a movie for the second time or listening to the same song for hours are popular forms of cultural consumption. However, repetition is not articulated in the literary, cinematic or musical experience in the way it appears in video games. In this medium to repeat something is not only a volitional form of consumption (Russell and Levy 2012) in which the player freely decides to re-experience the game. The practices of volitional reconsumption are linked to Kierkegaard's idea of bringing up a new experience out of repetition, for "that which is repeated has been (otherwise it could not be repeated) but the very fact that it has been makes the repetition into something new" (Kierkegaard 1983: 149). However, in a game sometimes there is no other choice but to repeat the challenge whether we want it or not.

Having to repeat something in a video game cannot also be reduced to trial and error experiences because, as it will be shown later, this is only one of the many faces in which repetition appears as a mechanic embedded within the playable dimension of the game. Thus, the focus of this paper lies on what can be named as the ludic core, that is the complex formed by the rules, rewards, penalties, goals and the controls that provide feedback between the player and the game. In modern video games, the ludic core interacts with a fictional universe and an audiovisual landscape, forming a complex, interactive system designed by creators that is enacted by the player over an electronic device (Lozano 2015).

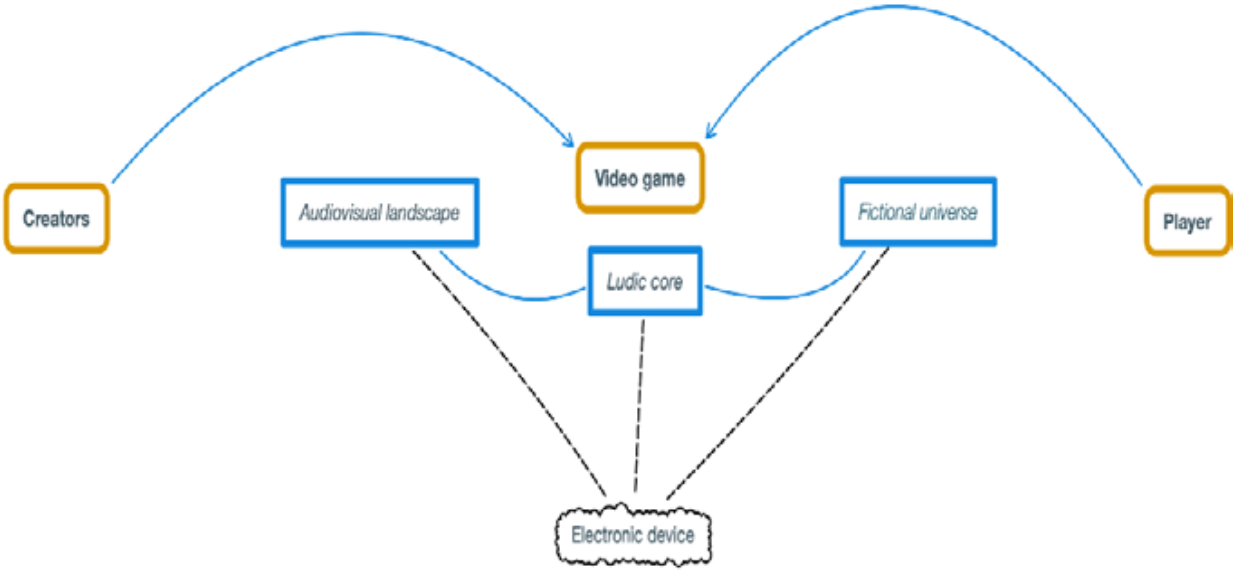


Fig. 1. A video game as a mix of audiovisual landscape, fictional universe and ludic core supported by an electronic device

The idea of repetition as a core feature of games should not come as a surprise as Huizinga has already shown that repetition played an important role in this medium. In his famous book *Homo ludens*, he stated: "In this faculty of repetition lies one of the most essential qualities of play […]. In nearly all the higher forms of play the elements of repetition and alternation (as in the refrain), are like the warp and woof of a fabric" (Huizinga 1980: 10).

According to the Dutch anthropologist, games are rooted in a given culture and can be transmitted along generations precisely because they can be replayed. Each session of the game is unique and unrepeatable. However, its structure acquires a sort of fixated form with

rules and conditions of play that allow to preserve it for future generations. Videogames add to this feature certain aspects related to their digital nature, but it can be said that repetition also plays a key role in this regard.

Despite its central role in videogames, it seems that academic literature has not shown interest in repetition yet. It is not possible to point to a certain *corpus* of studies regarding this topic, but there are some insights around the issue that may confirm its relevance and be worth of further exploration. Gazzard and Peacock (2011) show that some repetitive processes of videogames reproduce a ritual logic because they start important changes in gameplay, that is the recurrent collection of coins, totems and similar items that lead to the discovery of hidden paths.

Johnson (2015) poses that repetition in videogames is a complex phenomenon that can be helpful to seek out deficiencies of design. We can find an example in imprecise control designs that force the player to repeat the same button sequence two to three times because the game is unable to understand it correctly. This frequently happens in systems based on gesture recognition such us Microsoft XBOXs Kinect or Nintendo Wii and WiiUs sensor bar. Johnson also thinks that repetition is useful in videogame design to trigger certain emotional states in the player.

In any case, videogame players seem to be familiar with repetition, and they often engage in repetitive processes during gameplay. As Dovey and Kennedy explain, some players take the task of improving their skills to achieve goals and overcome challenges with total mastery very seriously, even if that implies going through an endless rehearsal of the same set of actions and routines. They write: “No other kind of cultural consumption requires this kind of repetition. Instead, we find it in cultural activities where musicians or sports players are called upon time and again to repeat actions to achieve a preferred performance or a kind of virtuosity” (Dovey and Kennedy 2006: 116).

Thomas Grip (2011) discussed repetition as a problem of design in the official blog of Frictional Games, the company behind the horror game *Amnesia: the dark descent* (2010). According to Grip, repetition plays a decisive role in the way the game is played and perceived and he lists a series of examples: a specific mechanic could take all the credit because of its importance, ruining the experience of the whole videogame. A routine that has to be performed too many times can diminish the verisimilitude and coherence of the title, making it too

simplistic, unreal or artificial. Some key episodes can lose their uniqueness if they can be easily compared to similar events that happened before in the videogame.

Array (2012) also focuses on videogame design and how players perceive repetition. Even though repetitive sequences of actions and patterns are the base of enormously popular and successful games like *Rock band* (Harmonix Music Systems 2008) or *Guitar hero* (Harmonix Music Systems 2005), repetition is usually seen as a flaw and not as a feature purposely introduced into the game: "Repetition in games is almost universally viewed with disdain. No marketer in his or her right mind would try to sell anyone on the promise of repetition" (Array 2012). To repeat something becomes a tedious process that has to be avoided while we play where the less we have to repeat a level, the better we play the game. It is obvious that the lack of depth and repetitive mechanics can exasperate the player, that is the grinding process present in lots of Role-Playing Games that forces the player to fight time and time again with the same types of monsters to get a rare item. On the other hand, Array also poses that there are mechanics based on repetition that have proven their usefulness in engaging the player for hours on end: "In *Trials*, you attempt to negotiate an obstacle course with your bike, and frequently these courses last for roughly a minute or so. As with the others, players routinely engage in repeating the same course 20 or 30 times in a session before losing interest, at least temporarily" (Array 2012).

3. *The many faces of repetition*

Following this background of research, I will argue that repetition, far from being only a deficiency of design, can play a significant role as a creative factor and positively affect the way the player perceives the game. To do so, I will focus on those forms of repetition tied to actions that players carry out during gameplay or that depend directly on their performance. Videogame users have different courses of actions at their disposal – break, steer or accelerate in race games or design a sewage network in a city building game, and they must know how to use almost every movement and skill to make their way through the game universe. The following list does not claim to be exhaustive but tries to provide clues to categorize some of the most common forms in which players face repetition while they are playing:

- repetition as combination: it is common that players need to repeat series of buttons to make powerful combos in fight games or to earn more points in musical titles. Ryu's famous Hadouken in *Street fighter II* (Capcom 1991) and by extension most of the combos in fight games belong to this kind of routines. These combinations were previously designed by the developers for the player to exhibit their game mastery through their execution;
- repetition as rehearsal: in tutorials and practice modes players repeat a set of actions to improve their abilities. The main goal in these stages is to achieve new skills to get ready to face real challenges through a process of trial and error. The reason is that penalties in tutorials are almost non-existent and most of the time only imply the repetition of the action. The player can thus explore every course of action while avoiding handicaps or higher punishments. Tutorial levels and practice modes are built under this use of repetition. For example, *Mirror's edge's* (EA DICE 2009) first level is a good example of this kind of scenarios designed to rehearse most of the playable possibilities available in the game. In this game, we control Faith, a "runner" who traffics sensitive intelligence and has to escape from police forces across rooftops, cranes and other structures. It is really difficult to master Faith's control, and the player needs to spend quite an amount of time in the tutorial stage to achieve the necessary skill to excel in the game;
- repetition for incompetence: undoubtedly, the most common form of repetition in videogames since their early years is that which forces the player to go back through a series of actions as a penalty for their failure. When we lose a life or are unable to solve a puzzle in a timely manner we must replay a significant part of the game should we want to continue[2]. Repetition appears here as an interruption of the game flow and represents a critical time in gameplay that may frustrate the players, making them want to give up on the game. To soften this impasse, some videogames rewrite these kinds of punishments and embed them into the gameplay in a subtler way. Such is the case of *Prince of Persia: the sands of time* (Ubisoft Montreal 2003) where the player can use the Dagger of Time to control recent events and even revisit

[2] However, to heavily punish the player because of his incompetence can be used to captivate some players. Games like *Ghosts 'n' Goblins* (Capcom 1985) or *Dark souls* (From Software 2011) owe their fame to their high difficulty and demoralising penalties.

them, that is when the character teeters on the edge of a building to retry a tricky jump;
- repetition as irony: players can deliberately execute the same action time and time again to appropriate it, giving it a new meaning through that process. For example, there is an unwritten rule in online First Person Shooter games such as *Counter-strike* (Valve 1999) where one of the best ways to make fun of another player after killing his avatar simply consists of repeatedly crouching down and standing on top of their corpse. Another such case is one of the most valuable units in the Real-Time Strategy game *Age of empires* (Ensemble Studios 1997) where the priest can convert enemy units to increase the player's army. The priest is best known for his "wololo" chant, whose peculiar sound has become an Internet meme. The Internet is full of videos of priests "wololoing" things, endlessly repeating the choir in hilarious situations. Thus, these kinds of actions sometimes go outside the videogame world and are used in other media like YouTube videos, expanding the affordances of the original game in a way that goes beyond the intentions of the creators.

These common types of repetitive processes and actions show that repetition is not only bound to punishments or badly designed mechanics but can be used as a creative solution to problems of design and even be a key part of gameplay. Platform and puzzle game *Braid* (Number None, Inc. 2008) bases most of its inner design on the manipulation of time, allowing the player to rewind an action as many times as he desires. The most interesting thing is that going back in *Braid* serves not only the purpose of avoiding mistakes but acts as a necessary feature to solve some advanced puzzles. There are some objects and foes in this game that are immune to this manipulation, and they continue their routines despite the temporal regression. Good management of these kinds of anomalies is key to success in later stages of the game.

A limited but well-stablished set of possibilities of action is as important as varying goals. As Swink points out, there are persistent elements within game mechanics that, if combined with changing circumstances and goals, make the grounds for a game feel (Swink 2009: 16-20). In *Super Mario bros.* (Nintendo EAD 1985) the player engages in an endless loop of running to the right occasionally performing jumps, but there are varying elements that in combination with that short and repetitive set of movements lead to a great gameplay. Both factors are equally important, and it is hard to find videogames that do not follow

this process of balancing repetition and alternation. One counter example could be *WarioWare, Inc.: minigame mania* (Nintendo R&D1 2003). This game makes the player adapt to extremely short minigames that last a few seconds, whose objectives and mechanics sometimes do not have anything in common. It provides an unconventional experience because it lacks the appeal of coherence provided by persistent elements within mechanics.

In summary, repetition appears in many respects in videogames. Grodal points towards an "aesthetic of repetition" as a distinctive feature of videogames. According to him, we acquire skills and abilities by repeating sets of actions and movements in the same way we familiarize ourselves with everyday life routines and environments:

> In several respects, video games provide an aesthetic of repetition, similar to that of everyday life. A film is mostly experienced as a unique sequence of events, and we do not learn the physical outlay of a given simulated world very well, we are carried from space to space. In everyday life, however, we repeat the same actions over and over in order to gain mastery. When we arrive to a new city or a new building we slowly learn how to move around, and if we want to learn to drive or bike, we exercise those skills until we have acquired the necessary procedural skills. The video game experience is very much similar to such an everyday experience of learning and controlling by repetitive rehearsal. (Grodal 2009: 148)

Now I will give three examples of videogames whose common ground is that they use repetition to create unconventional gameplay.

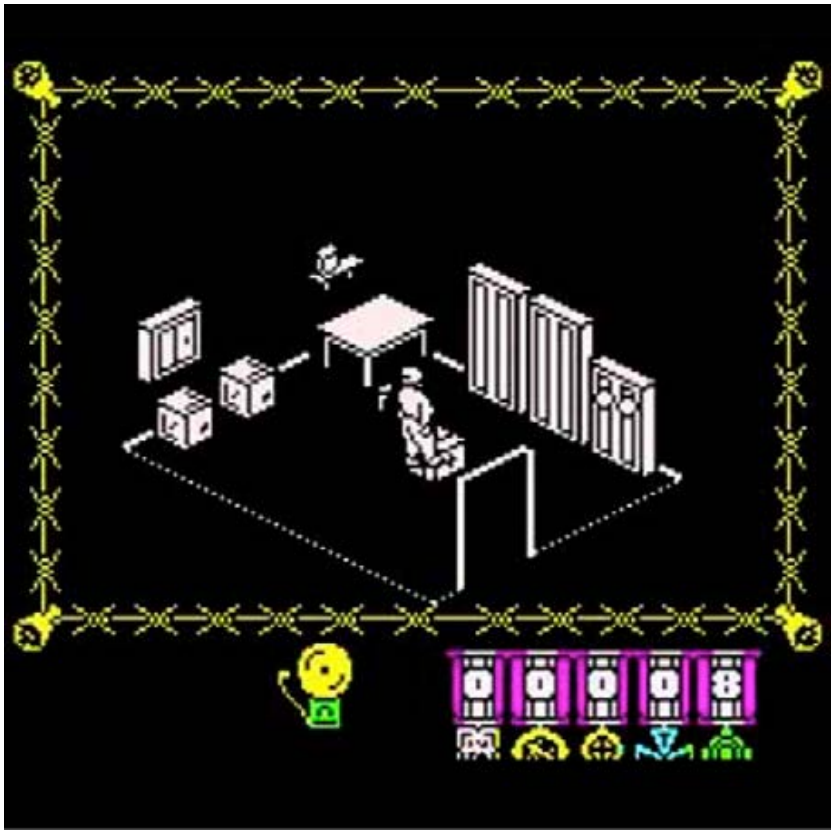
4. *Exploring the expressive possibilities of repetition. Three case studies*

4.1. The great escape. *Making the player aware through routine*

The eighties are one of the most important decades in the history of videogames. We just need to remember facts such as the American industrial crisis of 1983 or the arrival of the medium in Europe in time with the birth of British and French industries (Donovan 2010). This decade also witnessed the rise of the "golden age of Spanish software" (Esteve 2012). In sum, that period is crucial to our understanding of the current state of the videogame industry and its legacy. Numerous titles were developed by pioneers trying to push forward the possibilities of this young medium. One of these games was *The great escape*

(1986), developed by Denton Games for ZX Spectrum, Amstrad CPC, Commodore 64 and DOS. Similar to John Sturges's namesake movie, the player controls a prisoner locked in a Nazi concentration camp. The main goal is to escape, and the key is going around unnoticed while exploring the surroundings to seek out key items.

Fig. 2. *The great escape* (Denton Games, 1986)



The great escape's game design is simple but made conscious use of repetition and routines in videogames. If the controller is not used to move our character, he will act autonomously as a regular prisoner, wandering around the courtyard and taking part in the main activities of the camp: eating, sleeping, taking attendance and other mundane tasks. Our mission as players consists of identifying opportunities to

break from these routines and explore freely, preferably not during the activities above[3]. The most interesting thing of this design is that the system executes the routines if the player decides not to act. In other words, the player takes part precisely to interrupt the repetitive behavior.

If we decide to follow the tedious rules imposed by the guards, we will wander endlessly around the perimeter of the camp, but we will not see a "game over" screen. The flow of gameplay does not lead to an interruption of the game but can be understood as a playable possibility compatible with the rules of play. Thus, a game mechanic based on repetition can add to the game's peculiar nuances, including moral dilemmas: not taking part in the game can be seen as a legitimate way of playing it where we voluntarily become just another guard that watches over the inhuman conditions that the prisoners suffer.

Juul precisely stated that one of the most peculiar features of videogames is that players must take part in its events to progress in the game. Thus, the player becomes an accomplice and a co-author of the plot: "The experience of complicity is a new type of experience that is unique to games, more than simply witnessing a fictional character performing the same actions" (Juul 2013: 113). Juul discusses that the lack of tragic endings in videogames imbues the players with a feeling of responsibility because of this implication, a feeling that does not arise in other arts and media because the characters are not under our control: "The awkwardness of the tragic game ending […] shows that we accept regular, non-interactive tragedy in part because we lack any responsibility for the suffering" (Juul 2013: 112).

4.2. Every day the same dream *and the aesthetics of boredom*

Every day the same dream (2009) is a short game developed by Molleindustria, a Milanese collective known for creating titles to criticize the contradictions and injustices of developed societies such as inequalities of labor markets or the hidden truths of the fast food industry

[3] This title was not the only to take advantage of repetition in a creative way. Spanish videogame *La abadía del crimen* (Opera Soft 1987), inspired by Umberto Eco's *The name of the rose* (Eco 2012), invited us to travel to a mysterious abbey where a monk had been killed. As a guest, we must obey the rules and routines like the rest of the monks, attending prayer times and sleeping at certain hours. Not following these rules results in penalties and eventually expulsion from the abbey.

(Soderman 2011). In *Every day the same dream* the player's character is a regular office worker who starts a new day and gets ready for the daily grind. The game starts with our character waking up from his sleep, turning off the alarm, getting dressed, waving goodbye to his wife and taking the car to face our responsibilities. The day concludes when our character arrives at his cubicle. After that, the game takes us back to our home to start a new day and repeat the process. The linear design of scenarios allows us only to walk left or right. The game can be finished in half an hour, but the plot offers multiple ramifications that get triggered depending on our behavior.

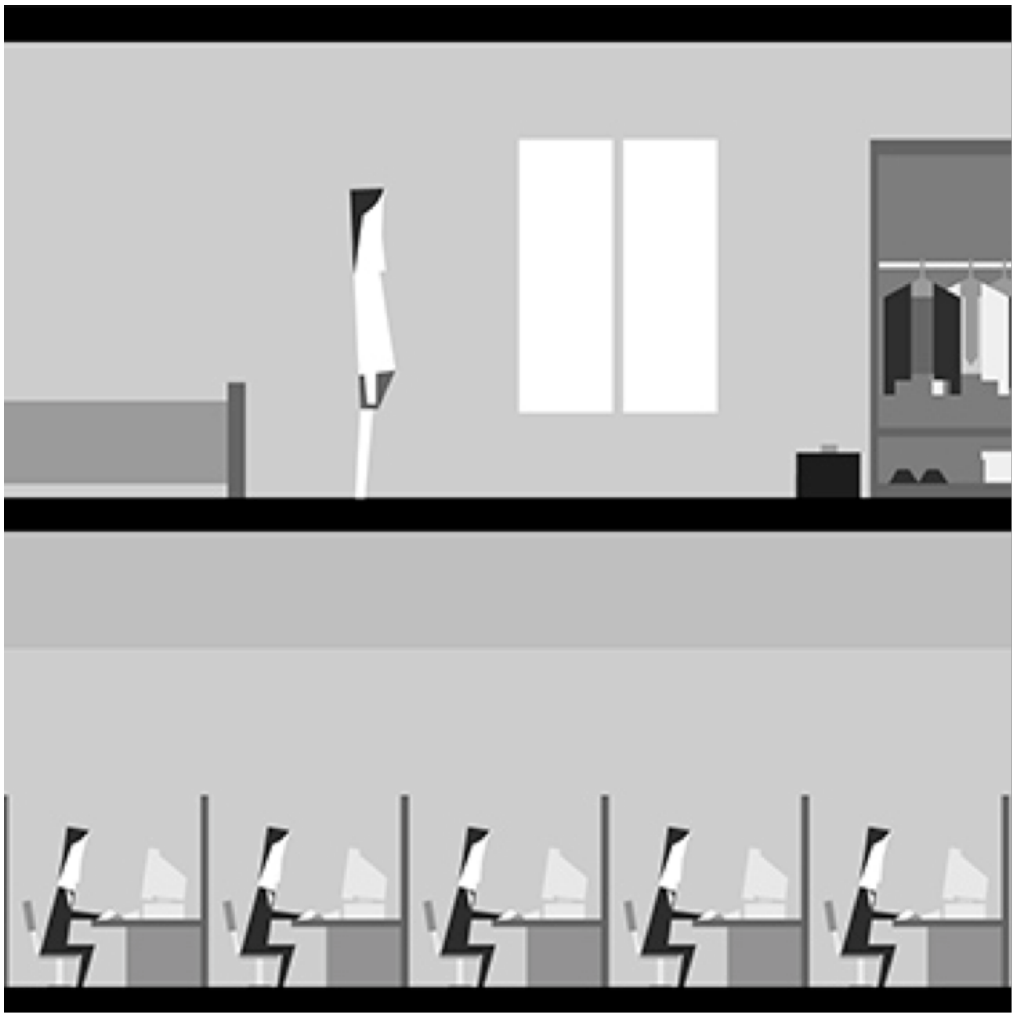


Fig. 3. *Everyday the same dream* (Molleindustria, 2009)

We may want to follow a simple routine for the first two or three days, but boredom will push us to explore new possibilities: why instead of going to the parking we go left, talk to a beggar and let him

take us to a cemetery? Not going to work will get us fired, so disobeying the everyday routine will help us discover hidden secrets and the true ending.

I highlight *Every day the same dream* in this article because of the way it combines many aspects of videogames to push the player to a specific emotional state. The complex structure of videogames can be divided into at least three tightly intertwined dimensions: audio-visual, where most videogames display sound and images; narrative or fictional, where the videogame experience is weaved into a story or plot, whether it be an elaborate fiction made by a team of screenwriters or some sort of account made by the player to give meaning to his experience; and gameplay, the very core of the medium in which we can find the set of rules, penalties and rewards that players agree to when they play.

Molleindustria's game is based on a very simple game mechanic that lets the player experience the same fatigue and annoyance felt by the office worker doing literally every day the same routine[4]. Our boredom is his *tedium vitae* and the only freedom we can have consists of walking left instead of right with the hope of finding something that might give us a break from that undesirable lifestyle. Thus, a game mechanic based on repetition perfectly meshes with a black and gray color palette as with a monotonous melody played in an endless loop, and that can be considered a great example of an aesthetics of boredom.

4.3. Papers, please*: a relentless bureaucracy simulator*

Papers, please (2012) is a game developed by Lucas Pope where one plays a solitary customs and immigration inspector in Arstotzka, a fictional state that embodies most of the fetishes of totalitarian ideologies: tight population control, devotion to the state and their rulers, military presence in each corner and so on. Our duty as an inspector is to allow or deny access to applicants by checking their documents. Story mode progresses from regular collation of documents to an increasing set of rules, exceptions and extra paperwork that make our

[4] Another videogame that follows the same core idea with a similar scope is *Keep working* (Ben Chan 2015), a game in which we will be an office worker trapped in a hyper critic version of a consumerist and competitive society (Fries 2015).

job extremely difficult. Sometimes we will have to deal with scripted migrants whose stories introduce moral dilemmas hard to resolve: must we obey the law and separate a family or just turn a blind eye on them? Should we deny access to a man who has all the papers in order just because the girl who applied before him told us that he had raped her? Can we allow illegal activities of rebels or act for the state and punish them?

Fig. 4. *Papers, please* (Lucas Pope, 2012)

The player receives positive or negative feedback through a salary that depends not only on the cases correctly solved but also on the mistakes we made. Each stranger correctly processed means an extra amount of money, but if we fail three times or more we are punished with a salary cut. At the end of each day, we need to manage the budget to attend to our family's needs: we have to pay for rent, food,

bills and unexpected expenses such as vaccines or birthday presents. Sometimes the salary is not enough, but as a man of Arstotzka our character must show himself able to provide for his family, otherwise he is considered as a pariah and will be substituted by another citizen. We can earn extra money if we make deals with the guards to send them migrants regularly for interrogation as suspects.

Papers, please has been studied for different reasons including for the way it combines game mechanics and a narrative setting into a tight relationship hard to find in other titles (Navarrete-Cardero, Ramírez Moreno, Vargas-Iglesias and Molina González 2014). It has also been of interest because of its introduction of moral dilemmas (Heron and Belford 2014). We bring this title here for its use of repetition to create a simulation of a complete bureaucracy. Most of the time we will examine documents of regular migrants knowing that the faster we process, the greater our salary will be. The increasing pressure of our job due to extra rules and exceptions will force us to ignore them on occasions when they try to talk to us, in order to process them as efficiently as possible. Those dynamics and details such as the prohibition to display personal memorabilia or presents at our work post create a suffocating environment that matches perfectly with the idea of working for a totalitarian state obsessed with control.

Johnson accurately depicts the feeling of impotence and frustration induced by the game: "The repetitive, bureaucratic work play of *Papers, please* envelops the player in rigid, mechanical and limiting forms of play that figurate the player as a cog in the machine, anonymous and insignificant" (Johnson 2015: 16). Unlike titles where repetition of actions is due to poor design, Lucas Pope's videogame transforms this process into a mechanic purposely made to diminish the freedom of the player and drive him towards a certain emotional state: frustration.

5. *Conclusion*

As a crucial feature of the ludic core, repetition in videogames appears in many respects but is often regarded negatively as a deficiency of design that goes against the verisimilitude of the game and undermines the freedom of the player. In this sense, repetition represents an obstacle that needs to be avoided. However, the design of game mechanics relies as much in varying elements as in persistent ones. Both factors are equally important to shape the gameplay. Also, the

intended use of prominently repetitive mechanics can contribute to the experience by adding unique nuances and features.

Among other possibilities, its introduction can be useful in creating a feeling of complicity with the tragic fate of the character, such as in *The great escape*. It can also act as a bond between gameplay and the visual and fictional dimensions of the game to build an aesthetics of boredom as with the case of *Every day the same dream*. Finally, it can be used to purposefully limit the freedom of the player and trigger feelings of impotence and frustration as in *Papers, please*. Under this scope, we can see repetition as a creative possibility that opens the door to create videogames able to explore topics like boredom, a central phenomenon in Western culture since the nineteenth century with milestones like Heidegger's philosophy. Thus, we will be able to ask questions such as how a game can be designed on purpose to create, for example, a feeling of existential anxiety.

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