Possible Worlds in Video Games:

From Classic Narrative to Meaningful Actions

by Antonio José Planells de la Maza

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INTRODUCTION

> "On my business card, I am a corporate president. In my mind, I am a game developer. But in my heart, I am a gamer."– Satoru Iwata (President of Nintendo)

Christmas holidays in 1987 were truly special. The bulky toy catalog of an important shopping center in Barcelona was the favorite reading for all children and the big worry for all parents. And wish lists for the "Reyes Magos" ("Wise Men") festival –agreements reached by tough negotiation between childish hopes and the family budget – were easily filled with figurines from *Playmobil*, *Star Wars*, *He-Man* or *The Ninja Turtles*, along with games like *Who's Who*, *Simon*, *Hungry Hungry Hippos* or *Tente* pieces.

Amid Silly Putty and Rubik's cubes, the Atari 2600 dominated video games in Spain with their indecipherable graphics and uncomfortable joysticks. But in 1987, everything would change. Backed by its success in Japan (1983) and the United States (1985), the Nintendo Entertainment System (NES) took up half a page in the toy catalog and was launched with a quirky game about a plumber who must save a princess from a monster. A plumber named Mario.

On May 23, 2012 – almost 25 years later – the prestigious Princess of Asturias Award in the Communications and Humanities category went to Shigeru Miyamoto, arguably the most famous video game designer in history. According the jury's statement, the creator of Mario "[…] is not only the father of the modern video game. Thanks to his great imagination, he has managed to create virtual dreams that enable millions

of people of all ages to interact, generating new forms of communication and relationships capable of bridging ideological, ethnic and geographic boundaries."

The social and cultural renown of Miyamoto is clearly related to the evolution of video games during their dissemination into Spanish households over the last 30 years, ranging from the so-called "Golden Age" of Spanish software to the current generation of gaming consoles and mobile devices. Big hits with children's audiences, including Mario, Sonic or Link, are now cultural references for an adult generation that enjoys, in equal parts, both nostalgic games and new offerings inspired by the latest technologies. And, along with this, the female audience and families have seen new ways of gaming, with Wii, social media and mobile platforms, suited to their preferences and tastes. Thus, the video game is to this day a cultural object that participates equally with other actors in the public imagination. In addition, the technical and artistic development, transmedia power and popularity of its universes, has allowed video games to transform its first and simplest gaming mechanics into vast, rich online fictional worlds open to different gaming experiences.

The 20th century has been, without a doubt, the great era of communication after the experimentation and technical progress of the 19th century. With the development and consolidation of film, radio and television into the mass media industry, came the arrival of the Internet at the end of the 90s as a symbol of globalization. All of these mediums, including more traditional media like the press, have been objects of study in Spanish academia to a greater or lesser extent. However, the careful study of the past quarter century (and the first decade of the current 21st century) shows that one of the most important communicative, aesthetic, narrative and cultural expressions has been systematically ignored by academia: video games. Data emphasizes this curiosity even further. Video games have a significant social impact and prove even more profitable than the

film and music industry combined (Pricewaterhouse Coopers, 2011; Spanish Association of Distributors and Publishers of Entertainment Software (aDeSe), 2011). Television is losing its audience because of the Internet as well as the growing consumption of video games by children and adults (especially by women and the elderly), who are attracted to video games that foster language learning, improve health or exercise the brain and intellect. And contemporary action films are increasingly influenced, aesthetically and narratively, by the great productions of Nintendo, Sony and Microsoft.

Regardless of the reasons that have ostracized the study of video games in Spain, it must be noted that its epistemological standing is currently in a state of remarkable emergency. Both in Europe (especially in Nordic countries) and the United States, video games have become an object of essential study to understand communication in the 21th century (Egenfeldt Nielsen *et al.*, 2008, pp.132-147; Mäyrä, 2008, p.56). Thanks to these contributions, electronic entertainment has gradually started to build a theoretical basis that sheds light on this unexplored and complicated terrain. Within this context of academic emergency, we propose an approach to video games from a seldom used perspective, even in the field of communication studies: the Theory of Fiction and, specifically, the perspective of the Possible World Theory as adapted to video games.

The Possible World Theory was born within a long philosophical tradition, especially after contributions from Samuel Kripke and Analytical Philosophy, which aims to explain the role that the possible and the necessary play in the existence of mankind. This theory does not focus on answering the classic philosophical question "Where do we come from and where are we going?" but instead "Could our origin have been different?", "Can our destiny be different?", "To what extent and under what conditions?" and "How is it possible that we anticipate things that have not yet happened and even things that could never happen?"

The philosophical idea of an autonomous, living world regulated by a set of norms that produce different options for what is possible and necessary, found a home in mid-20th century literary theory. In this case, possible worlds were those conceived in stories and poems and, therefore, fiction was constructed as a true space of action, complex and rich with nuance.

At the end of the 70s of the last century, the combination of the first computers, recreational pleasure and the vision of aspiring entrepreneurs laid the foundation for today's thriving electronic entertainment industry (Donovan, 2010; Kent, 2001). But much has changed since the era of arcades filled with new gaming machines and youth spending hours playing emblematic titles like *Space Invaders* (Taito Corporation, 1978) or *Pac-Man* (Namco, 1980). Today, video games have not only developed playability and graphic-sound capacity, but also have managed to build fictional worlds similar to film, theater or literature. Therefore, games make up real possible worlds inserted into the logic of fiction and contribute in a critical way to the current cultural imagination of contemporary society. Above all, video games are fictional and cultural objects.

This fictional approach does not imply a literal transfer of literature's theoretical-practical tools, but rather necessitates a true adaptation according to the distinctive ontological features of video games. That being said, this present work proposes a theoretical-practical focus based on the fictionality, interactivity and ludic perspective of the medium to analyze the construction of possible fictional worlds in electronic entertainment, or what we shall refer to as the configuration of ludofictional worlds in video games.

This research is chiefly based on three major knowledge areas and their conceptual features. First is Philosophy, the idea of possible worlds and conflicts with fiction. Second is literary and audiovisual Narratology with the controversial concepts of mimesis, fiction and narration. And lastly, the most recent studies on video games as autonomous objects and the analysis

of interactive space. In any case, and to avoid losing focus on research with interdisciplinary guiding principles, the Theory of Fiction is determined as the central axis, specifically the analysis of semantic and pragmatic components of fictional worlds in an essentially interactive relationship, i.e. what (inter)textual or intensional elements create meaning within the world, what extensive or cultural elements create meaning from the access and modification of this world and finally, what role the user or player plays from outside the process of fictional meaning.

Therefore, in this book, contemporary video games are considered complex fictional worlds that participate, as cultural objects, in inserted relationships within current social, economic, and political frameworks. And so we wonder "How do these objects bring out the laughter and anger of children and adults?" Or, in other words, "What type of structures and systems of meaning do video games establish from the perspective of fictional worlds designed to create ludic experiences?"

To answer this question, we will propose a theoretical-practical system of video game analysis using contributions of the Theory of Fiction and the Possible Worlds Theory that respond equally to the game's ludic perspective and the fictional perspective of the world it invokes. We shall refer to this approach as the "Theory of Ludofictional Worlds" regarding the specificity of video games as entertainment systems that participate in a fictional environment distinct from traditional mediums such as film or television.

However, the design of a theoretical framework and a methodological system for the analysis of ludofictional worlds must pass some preliminary phases of research: first, it must fulfill the terminological clarification of some concepts inherited from different knowledge areas and second, these ideas must be adapted to the distinctive features of video games.

The widespread use and, at times, the excessive ambiguity of terms such as world, fiction, narration or interactivity pose an

interdisciplinary challenge for this research. In this sense, it is essential to use them in the preliminary chapters with an interdisciplinary approach formulated by Analytical Philosophy, Language Philosophy, Narratology and various contributions from the field of Literature and Film Studies. In this way, we can establish and uphold a concrete meaning of each one of the concepts at hand.

After establishing the concrete meaning of each term, and along with the contribution of some key theoretical concepts, including Possible Worlds, Indexicality and Metalepsis, we will make a global adaptation of the concept of video games as objects of study. In this sense, traditional fictional worlds will be conceived as active game spaces, a model made by previous design (game design) with a prescribed ludic experience (game play), which may be expanded by activity unanticipated by players (play).

This relational model between game design, game play and play form the nucleus of the Theory of Ludofictional Worlds. The complexity of current video games and the many possible scientific approaches lead us to construct a theoretical-practical model with three different dimensions that may necessitate distinct levels of analysis, but that simultaneously show interrelation in their meaning. In this way, ludofictional worlds may be studied from a Macrostructural Static Dimension, a Microstructural Dynamic Dimension and a Metaleptic Dimension.

The Macrostructural Static Dimension involves understanding the ludofictional world as a formal system of linking together possible worlds. It considers a perspective that addresses the element of predestination in the game as a closed world in which the player has different ways of exploring according to possible and/or necessary actions taken at any given time. Thus, it becomes especially useful to analyze the global structure of each video game and the use of narrative worlds (cutscenes) and ingame scenes in the structure of the ludic experience.

On the other hand, the Microstructural Dynamic Dimension analyses how the movement and modification of the characters' inter-world identities develop throughout the course of the game. To do so, different theoretical categories are based on fictional features defined by characters' possible and/or necessary actions, their psychological sub-worlds – what they fear, desire and/or imagine, etc. – and the relationships created between them. In this way, this dimension emphasizes the idea that ludofictional worlds are predetermined spaces for action and relationships with other fictional beings that may sometimes become the central axis of the ludic experience.

The final level of meaning, the Metaleptic Dimension, replaces the idea of interactivity by proposing the narratological concept of metalepsis as the connection between the fictional world and the external user who is provided with certain mechanisms to participate in it. Thus, this perspective studies the physical and symbolic systems between the player and the world and vice versa, the internal leaps between different fictional levels and the sporadic and extraordinary disruptions to fictional boundaries that some characters may undergo.

PART I

FROM POSSIBLE WORLDS TO FICTIONAL WORLDS

Chapter 1

POSSIBLE WORLDS IN PHILOSOPHY

> "The optimist thinks this is the best of all possible worlds. The pessimist fears it is true." — Ralph Waldo Emerson

The concept of possible worlds is key to understanding the development and creation of this work. Thus, it is convenient to start our theoretical framework with a reflection on the idea of worlds and the implications that they have on the fields of Philosophy and Literature, as well as the study of video games.

The idea of worlds is one of the most complex and flexible concepts in the history of thought. From a strictly physicalist perspective, the world is seen as a totality and the organization of all things that exist on planet Earth, while in the Humanities, the world is seen as a system that integrates ways of thinking – the Christian world, the pagan world – or imaginary elements – the world of Emma Bovary, the world of Sherlock Holmes. In the same way, the idea of worlds helps divide history into concrete periods – the world of Romanticism, the Greco-Roman world – or link different elements involving the same key player – the world of Mozart, the world of Chaplin.

As we can see, this multifaceted concept presents some common elements in all its applications: worlds consist of a plurality of subjects, objects and states that are closely related to each other and, thus, they form autonomous and specific systems of

representation. These constructs, especially those related to political and social thought, are essential for understanding our reality as immediate, just as they are involved in our daily choices. For example, the idea of slavery plays a very different role in the Western world today than it played in the Roman cultural world: today, the simple idea of subjecting a human to such degrading treatment is outside the accepted norms of our world's value system, while for a Roman citizen in the 1st century B.C., slavery was not an ethical-legal issue, but rather an overwhelming reality strengthened within a world of traditions.

As a matter of fact, many worlds are conceived in opposition to other worlds. The proto-democratic world of flourishing Athens was overtly contrary and opposed to the autocratic and strict Spartan world, while the world of science defended by Galileo could not coexist with the Theocentric framework of the hegemonic Renaissance Catholic Church.

Thus, from Greek and religious teachings to new forms of digital communication, humanity has constructed collective imaginary worlds of different natures and scopes to design, spread and maintain certain worlds, but also to analyze and oppose them. From a social perspective, popular language has also taken hold of the idea of worlds to distinguish what is common practice (or accepted in the structure of the real or actual world) from that which deviates from the norm. Thus, somebody brilliant or who does extraordinary things, we say "is not of this world," while somebody scatterbrained or who is a dreamer "lives in another world."

At the core of thought, each knowledge area has used the idea of worlds best suited to their needs. Thus, in Mathematics, worlds help explore distinctions and contradictions among paradigms, while in the field of artistic studies, representation and the matter of referentiality make up the central elements of contemporary debates. In the field of Philosophy (and, especially, Philosophy of Language and Philosophy of Logic), great thinkers have found a reflective context in the idea of worlds, triggered

by questions including "Is this world real?", "Could it be different than how it is?" and if so, "What would it have been like if it were different?"

Since the 80s of the last century, the consolidation of postmodern thought had an important impact on the traditional concept of linear narration and its relation to the idea of worlds. Faced with the Aristotelian structure of beginning, middle and end – which had established the dominance of a certain narrative over any other kind – other ways of considering space and time gradually became introduced; non-linear structures. These new narrative methods emphasized those possible stories that never appeared in traditional structures (Branigan, 2002, p. 110) and posed a fundamental debate from an ontological perspective: how are these worlds set up and what should be done within them? (Mchale, 1987, p. 10; Harvey, 1990, p. 48). At the same time, Chaos Theory (Prigogine and Stengers, 1984) brought the idea of possible worlds to life in the field of science by highlighting the tendency towards irreversible chaos and, thus, the rejection of a single substantial and consistent reality in time.

Along with the idea that other worlds are possible, contingency (that is, the potential that things can or cannot be) also put sequential structures into question and, therefore, the traditional concept of time as a linear and ordered system. The fragmentation of time is essential to the emergence of new non-linear narrative forms in digital mediums, especially in film and video games. Modular narratives – that is, the fragmentation of stories into "units" unrelated by space-time connections (Cameron, 2008) – and the aesthetics of databases – that is, the concept of fictional worlds as great hierarchical systems of characters and scenarios (Bizzochi, 2005) – are good examples of the breakdown of linear structures in favor of new forms of fragmented expression based on what can be instead of what is.

Because of this, and as we shall see further, the emergence of possible worlds and the fragmentation of the fictional – exemplified in the modularity of stories and their structuring as

databases (Manovich, 2001) – represent a key requirement for video games. The design of the game's fictional world should, on one hand, have a certain space of interactive possibility for the player – that is, the establishment of the possible over the linear – and, accordingly, should set forth a fragmentation and hierarchy of characters and scenarios.

In this section, and as a preliminary component to a theory of video games as ludofictional worlds, a theoretical overview of the possible is put forth. Therefore, the structuring and complexity of the possible within the idea of possible worlds is explored, both from the perspective of Philosophy – with different relationships between the real and the possible, and the complexity that non-real characters and scenarios introduce to fiction – and its application to the field of Literary Fiction and theoretical-methodological concepts.

1.1.- THE PHILOSOPHICAL CONCEPT OF THE POSSIBLE

Throughout the centuries, Philosophy has been interested in different issues related to mankind. But it was not until Leibniz – in *Theodicy,* published in 1710 – that this discipline articulated a true discussion on the world's mutability and its origins as "the best of all possible worlds."In the mid-20th century, modal logic was booming in Europe and the United States, especially following the articulation of its semantics by American philosopher Saul Kripke (1963). This discipline made classic logic adaptable to formulating new concepts regarding the realities of our world that had difficulty fitting into this vision. Thus, the introduction of modal operators "it is possible that" – represented by the symbol ◇ – and "it is necessary that" – represented by □ – established a system of assigning truths to statements in relation to a specific possible world. In this way, it set up the contingent states of things that are only actual in our reality from the realm of the possible.

For example, the statement "Hitler won World War Two" is always false under classic logic or modal logic, regarding our

real world. However, the statement "it is possible that Hitler won World War Two" determines a modal truth that does not invalidate the truth/false condition of traditional logic: while it is false that Hitler won the war in our world, it is true that it may have been possible for him to win it, provided that such a condition were valid in a given possible world – and it is evident that we can imagine such a world. Also, Kripke's approach introduced some interesting concepts. On one hand, possible worlds establish certain links between each other, called *accessibility relations*, which allow transitivity between them. On the other hand, possible worlds consist of two fundamental attributes: the complete nature of its structuring – that is, the states of things contained in the world that have been or can be produced according to the rules of the system – and the consistent or coherent nature – that is, that no contradiction exists. As we can deduce, the attribute of completeness necessarily implies the attribute of consistency, and vice versa. We shall see as such in the following example:

> (1) For the statement about John in world W, if "John is a physician" (P) is true in world W, "John is not a physician" (-P) is not true in world W[1].

If –P were true, we would then have, on one side, a contradiction that P and –P are true at the same time – John is and is not a physician – and incompleteness – in world W there is the same physician and non-physician John.

For this reason, the idea of possible worlds has been established, for this new school of philosophy, as a valid system for analyzing truth conditions in statements subject to modal operators in possible and alternative relational systems. In this way, possible worlds are constructions of how things could have been if they

1. In scientific works of Philosophy, it is common to present examples with consecutive numbering between parentheses. Here we have chosen to do the same with the aim of respecting this tradition.

had been different than they are (Bradley and Swartz, 1979, pp. 1-8).

Ever since Leibniz's multiplicity of worlds and the rise of Kripkean modal logic, contemporary Philosophy has been interested in two essential issues: first, "What relation is there between possible worlds and the so-called real or actual world?" and second, "What ontological rule sustains worlds existing as merely possible?"[2]

1.2.- POSSIBILISM, OR THE POSSIBLE VERSUS THE REAL

Classical possibilist theorists created terminological precision essential to the debate on the state of possible worlds. They distinguished between being and existence. For a classic possibilist philosopher, all "is," but not all "exists" – in the sense of "being present," "being actual" – which "is" but does not "exist," or "is not present," or "is not actual" – but rather a mere possibility. In this way, within the category of what "is," we can find non-existent concrete objects – for example, the lost city of Troy, abstract categories, deadly sins, mathematical concepts and even fictional objects that never existed nor could exist – for example, dragons. Thus, while everything that exists "is," not everything that "is" exists. All this keeping in mind that while many things that "are" could exist at some point, others will never exist. This latter case, of "being" without ever existing, was presented by Bertrand Russell in the well-known example of the Golden Mountain: no Golden Mountain exists, though if possible Golden Mountains had existed, indeed they would have been indeed Golden Mountains (1903, p.449).

2. Depending on how such questions are answered, philosophers have grouped themselves as either possibilists, where the possible remains above the real; hyperactualists, where possible worlds either do not exist or their existence is irrelevant; and actualists, where the current world remains above possible ones. Considering the scope of this book and to avoid distractions and theoretical confusion, only an analysis of the first group will be addressed.

Thus, classic possibilism presupposes at least two essential features in the metaphysical conception of the possible: first, while everything "is," everything "pre-exists" – similar to the Platonic notion of the idea – even if it does not "exist" nor is "actual," although it could have been at some point. Therefore, possibilism admits possible but non-existent worlds and objects. To clarify, we shall imagine the following example:

(2) It is possible that there are aliens.

From a possibilist perspective, the statement is not limited to establishing a simple possibility (which, conversely, many philosophers, possibilists or otherwise, could accept), i.e. it is *possible* that aliens exist. In fact, possibilism goes one step further by considering that aliens *pre-exist* while they *are,* and if subsequently they *exist* for us (for example, because they land on our planet), it would not invalidate the previous statement. Therefore, the possibility itself already exists (or better, pre-exists) and the real world (understood as the actual world) is simply the result of the choice between one of many.

Second, classic possibilism defends the independence of possible worlds without a priori casual relations existing among them, nor hierarchies of any kind (since, otherwise, we would find ourselves facing actualist positions, as we shall see later). In this way, the most appropriate philosophical approach defines a possible word as "a maximally consistent set of states of possible things" (Romerales, 1999, p. 17). Or, in other words, a possibilist possible world is a system of complete, self-sufficient and autonomous states of things.

This acknowledgement of pre-existence and independence, along with the ideas of being and existence, is key for understanding the approaches of the two main representatives of possibilism: Gottfried Leibniz and David Lewis.

1.2.1.- LEIBNIZ AND "THE BEST OF ALL POSSIBLE WORLDS"

The most famous (and most misunderstood) possibilist theory in the history of Philosophy was presented by Leibniz in various letters sent to theologian Antoine Arnauld starting from 1680 and within *Theodicy* (1710). The German thinker's work has been historically undervalued, because of the complexity of its composition and the scope of its theoretical body – its concepts appear scattered in numerous texts, letters and books. Leibniz suffered the ridicule of his rationalist colleagues for his reflections on possible worlds and the existence of God. The most fierce and famous of all was Voltaire's work *Candide*. In this novel, the French writer introduces the character Doctor Pangloss, who is obsessed with showing everybody that the world in which they live is "the best of all possible worlds" and thus, even the greatest tragedy has sufficient justification. As a result, the term Panglossian defines somebody who displays naivety before the vicissitudes of the world in which he lives.

In any case, the greatest problem related to Leibnizian possibilism lies in the erroneous interpretations that have grown stronger with time[3]. As Aguado Rebollo notes (2009, pp.19-22), the best of all possible worlds does not necessarily consist of the best ethical system – i.e. the best world is not understood as the world with the most good – nor did Leibniz give it an immovable, immutable and eternal character – as he did, at times, when describing divine perfection.

Leibniz's divinity does not correspond to a Christian, fair and kind God, nor to a Cartesian God, a distant and impenetrable being that plays with humanity as if it were a puppet and limits the knowledge of things to our own existence: "I think, therefore I am." Divine power for Leibniz, according to his rationalist concept of existence, is made up of an essentially mathematic and mechanistic force. Also, in this empiricist construction, man is presented as a being capable of understanding, to a greater

3. For an extensive overview of the lines of interpretation of the Leibnizian system and its main complications, see Heinekamp and Schupp, 1991

or lesser extent, divine purposes because otherwise, it would be absurd to even consider a reason for his actions – unless, of course, for mere fanaticism or flattery. The Leibnizian God appears, therefore, as an infinitely wise and rational being, but at the same time, sufficiently close to humans so they can perceive, within the possibilities, some of his purposes (Leibniz, 1710, §4).

With this empiricist and intimate God, the German philosopher aims to answer the central question of his theory: "Why is there something rather than nothing?" (Pérez de Laborda, 1989, p.14). If God is infinitely rational and wise, it means that an infinite series of possible worlds exist that he conceived and, therefore, that nothingness is not possible. Reason, and by extension logic, is the main axis that shapes everything: everything belongs to reason – whether more or less complex, or whether perceived completely or only partway – and God has logically thought of all possible worlds that can be conceived. This rationalist concept of the possible distances Leibniz from the approaches of Descartes and Newton regarding physics and metaphysics. Both writers pose atomistic postulates – focused on the atom, in "showing what exists," while Leibniz's rationalist approach contemplates that we cannot limit ourselves to showing or seeing, but rather we must understand what exists behind what is shown or seen, and what final reason has brought those elements into existence (p. 13).

That being said, what does it mean that God has chosen the best of all possible worlds according to logical reason? And, on the other hand, in what position is the freedom of man regarding the determinism of a possible world chosen by strict rationality?

At first, God contemplates *monads*[4], small and irreducible metaphysical atoms and, from them, what is possible. From their simplicity, the possible is, simply, possible. But together with another possibility, the result can be possible – that is, both

4. The articulation of monad systems and their distinctive features was established in his work Monadology (1715).

possibilities are compatible and, thus, *composable* – or impossible. In this relationship, the two main principles of Leibnizian Philosophy appear: the principle of sufficient reason and the principle of non-contradiction.

The principle of sufficient reason is the logical embodiment of the axiom "everything has a reason" (Leibniz, 1710, §44-45). Thus, a set of first-level logical rules exist, always present, that "state the same of themselves or deny their opposite" (De Mora Charles, 1992, pp. 286-287), i.e. relationships such as "P is P, P is not not P," or "If P, then Q." Other truths present in any possible world may be reduced to this first-level logic. From this sufficient reason – first-level logic – "thus there will be some necessary truths and other contingent ones. What is considered necessary Leibniz calls contingent; but what implies contradiction, or rather, the negation of necessary, is called impossible. Other things are called possible" (p.287).

On the other hand, the principle of non-contradiction establishes two general ideas. First, something cannot be possible and impossible at the same time and, second, something cannot be neither possible nor impossible – that is, it must necessarily adhere to one of these two categories.

From these two principles, God conceives of infinite possible worlds and choses one of them as the best possible.

> "As in mathematics, when there is no maximum nor minimum, in short nothing distinguished, everything is done equally, or when that is not possible nothing at all is done: so it may be said likewise in respect of perfect wisdom, which is no less orderly than mathematics, that if there were not the best (optimum) among all possible worlds, God would not have produced any. I call 'World' the whole succession and the whole agglomeration of all existent things, lest it be said that several worlds could have existed in different times and different places. For they must needs be reckoned all together as one world or, if you will, as one Universe. And even though one should fill all times and all places, it still remains true that one might have filled them in innumerable ways,

> and that there is an infinitude of possible worlds among which God must needs have chosen the best, since he does nothing without acting in accordance with supreme reason." (Leibniz, 1710, §8)

It is important to note that God can conceive of any world – or better said, he conceives of them all at once, since he is infinite in wisdom – but only one of them is chosen to come into existence. And why this one, and not another? According to Leibniz himself:

> "once it is assumed that being prevails over non-being, i.e. that there is a reason why something should exist rather than nothing, or that there is to be a transition from possibility to actuality, it follows that even if nothing further is determined, there exists as much as is possible in accordance with the capacity of time and space (or of the order of possible existence); in short it is just like tiles that are arranged so that as many as possible occupy a given area" (1710, §225)

As previously mentioned, God does not create according to the criteria of good or evil in the world, but rather a mathematics seeking that possible world with the greatest number of things at the lowest cost. If we start with the idea that nothingness does not exist, then evil does not exist – since it is the absence of good. Leibniz's optimism can be summarized as "one is not unhappy, but rather limited in happiness." As a result, all worlds are good, but some are better – with a greater number of good things, for example Heaven – than others with less good things, for example Hell and its large number of less good things – with ours being, mathematically speaking, the best possible of them all.

Finally, and addressing the second issue – what happens to the freedom of man? – it may seem that if God chooses this world, it becomes immobile and cannot change as long as it is already the best one – and man, consequently, does not enjoy free will (Leibniz, 1710, §1-5). The solution to this problem comes from understanding that, at the moment of creation, the world chosen by God was the best possible, but in the future, it has no reason to remain so. Moreover, in his infinite knowledge, the divine being

gave man the ability to act, from which his idea of freedom is acquired. It is man who perceives good and evil – the least good, according to the Leibnizian God – and who chooses to transform this world into a space of more or less good things. And God knowing all the actions of man and the infinite paths he can choose is not the same as God determining the freedom of man in advance, choosing for him how to live his life (§6-8).

As we can see, Leibniz's concept of the divine and the possible manages to optimally reconcile two fields that have been historically conflicting: theology and science. The mathematic God not only has inspired a more humane and rational approach to religion, but also decidedly has influenced the scientific field, especially the principles of thermodynamics and energy conservation. But without a doubt, its main contribution remains its application to the principles of logic in metaphysics. Its first-level logical rules were a fundamental landmark for the subsequent creation of modal logic (Lenzen, 2004).

1.2.2.- LEWIS AND THE EXISTENCE OF ALL POSSIBLE WORLDS

David Lewis has been established as the most influential possibilist philosopher today. Far from Leibnizian ideas of God and the best of all possible worlds, Lewis delves into the motives that designate our world as real, compared to all others. Lewis' approach, called *modal realism* (1986), marks a clear difference from classic possibilism because it does not make the distinction between being and existing. For Lewis, *all that is, exists.* But not all that exists, occurs or may occur today – i.e. in the present[5]. In this sense, all possible worlds actually exist, but only some exist in the present.

5. As Sainsbury notes (2010, p. 73), Lewis' concept of "existence" completely absorbs the traditional idea of being, because from his perspective, all possible is real, but only a part of this extensive reality is expressed as "here and now." As we shall see, in Lewisian possibilism, the general idea that all is real has important repercussions in handling the matter of the fictional.

In this way, Lewis diminishes the importance of the idea of reality from an *indexical term* (pp. 92-93): all worlds exist but this one is actual because we are in it, just like other possible worlds are actual for the inhabitants within them. The expression "the post office is nearby" is true in relation to my physical location in the world and, therefore, its actual ontological character is relative. If another subject says so, his/her position will determine whether said post office is an integral part of his/her actual world or not, assuming that, in any case, it will be merely possible for us, unless we find ourselves with that same subject. Therefore, for Lewisian possibilism, all worlds are ontologically equal, on par with each other. There is no motive to elevate one world above another, as a natural and preconceived characteristic. And the only criteria to consider any of them actual is supported by the constant relative position of the subjects that populate this world – involving, accordingly, all the relatively actual worlds.

Thus, as long as all worlds exist – and are actual according to the *indexical term* – they are all real and, therefore, we do not speak of the purity of possible worlds, but rather autonomous and self-sufficient structures. For Lewis, these realities set forth their *inter-world identities* – previously referred to as *accessibility relations* – through the concept of *counterpart* (Lewis, 1968). The explication is as follows: if all worlds exist and are already populated by individuals, it is impossible that, for example, writer Stephen King could be somebody else in another world. The only possibility is that a counterpart to Stephen King exists, i.e. somebody in another world that resembles the American writer but who, in any case, will never be him.

In any case, and at present, possibilism – Leibnizian as well as Lewisian – remains a controversial topic. In this sense, Leibniz is criticized for an excessive commitment to a belief in the divine. Also, if we assume humans reason like God (Aguado Rebollo, 2009, pp. 21-22), and God cannot conceive of a world in which He does not exist, then there are no possible worlds in which

the statement "God does not exist" is true (Romerales, 1999, pp.19-20). On the other hand, the Lewisian concept has generally been considered false possibilism that disguises extreme hyperactualism: if all worlds exist at the same time, and the actual world is limited by an indexical term, then all worlds are, in fact, actual. Also, the theory of counterpart strengthens this criticism by demonstrating that, in fact, Lewis' worlds are in no way accessible, but rather at best they are similar (Platinga, 1987; Van Inwagen, 1986). In the latter case, Kripke's criticism – the so-called "Humphrey Objection," inspired by the president of the American Senate – clearly exemplifies the problem of counterpart: Hubert Humphrey would be interested, at any rate, if there were the possibility that in a possible world he would win the elections. But under no circumstances would he be interested to know that his counterpart could win the elections in another world (1980, p.45).

In summary, possibilism, with its own internal differences, has made an important contribution to the field of logic-modal systems and the idea of possible worlds. The classic distinction between being and existence, along with Leibniz's proposed theological and mathematical order, paved the way for a serious and structured study of the potential of modal concepts. Additionally, Lewis' possibilism marked a fundamental turning point by proposing a system of real worlds that defied traditional concepts of the possible as something celestial and ambiguous. Therefore, possibilist considerations are a crucial starting point for later understanding how video games construct the possible and the existing, especially on a level as complex as fiction.

1.3.- THE PHILOSOPHICAL PROBLEM OF FICTION

As we have seen, possibilism emphasizes the existence of all possible worlds and the reservation of one of them as the actual world, either by the grace of a Leibnizian God or Lewis' indexical term. In this sense, our actual world, however it may be determined, is a necessary reference, a natural anchor for understanding how other possibilities are articulated. And it is

only by assuming our own existence in a specific world that we can ask "What would our world have been like if it were completely different than it is?"

Therefore, referentiality is a key aspect of philosophical thought. We do not simply think, we think from a specific world: it matters little that this world has been chosen by God among others, or that it is ours because of issues relating to the position we occupy within it. What is truly relevant is our awareness of the actual world, the actual state of affairs, which let us make value judgments about concrete facts, despite a vast field of subjectivity and interpretation that also exists in coexistence with these facts.

We shall assume the following statement:

> (3) It is possible that you can visit the ruins of the city of Troy.

This statement, as such, is subject to the judgment of our world and the articulation of different possible and actual states. From a Western perspective and in the year 2012, this fact is true: previously Troy did not exist, but in 1870, Heinrich Schliemann discovered the ruins of the city and thus the value of the truth proposition for (3) changed from false to true. In this way, the modal statement remains subject, in its veracity or falsity, to the present, regardless of how we determine what is actual from possibilist or actualist positions.

However, logical statements are equally subject to the true or false criteria, not so much for their logical-semantic constructions as for their positions in a given possible world, in this case, the privileged actual world. Everything stated as a fact, even in its modal forms "it is possible that" and "it is necessary that," is therefore subject to referentiality from the perspective of our world.

Now we shall look at the following statements:

(4) It is possible that Gandalf is a powerful wizard.

(5) It is possible that Sherlock Holmes lives at 221 Baker Street.

From a philosophical perspective of modal logic both statements (4) and (5) are false for one reason: in a strict sense and from the anchoring of our actual world, there is no wizard called Gandalf, nor tenant at Baker Street called Sherlock Holmes to speak of. If something does not exist, then it cannot be deemed true or false, since there is no referent subject to judge. But, for some reason, we suspect that these modal statements express a certain truth: neither Gandalf nor Sherlock Holmes exist, but it seems possible to state, in a certain sense, that Gandalf is a powerful wizard and the residence of Sherlock Holmes is 221 Baker Street.

At times, the problem of existence can affect not only the designated being, but also the related properties. For example:

(6) It is possible that Pegasus can fly.

(7) It is possible that there are horses that can fly.

In this pair of modal statements, the problem of existence is twofold. On one hand, (6) is false for its designated being, i.e. Pegasus does not exist, and its logical attribution in (7) is also false: it is not possible that flying horses exist. But, once again, it seems possible to say, in a certain sense, that Pegasus can fly and, thus, that there are horses gifted with this ability.

And, indeed, we can establish truth statements about non-real and non-existent beings and objects – or those with impossible existence – by removing ourselves from the strict modal statement, and thus entering the universe of fiction.

As we can see, philosophical theories seen thus far have a fundamental problem with the idea of fiction: an ontological issue. All have tried to respond to the modal statements from the perspective of human reality, that is, by assuming that everything

that is possible and/or necessary is closely linked to our real and physical existence. Thus, philosophical models consider possible worlds as accessible alternatives to the actual world, but never as impossible constructs from the perspective of their actual or merely possible existence. In this way, none of them were conceived or prepared to respond to truth statements about non-existent beings (unicorns, hobbits), but rather were for explaining alternatives to actual elements, at least, within an acceptable margin of "possible existence."

However, for classical possibilism, the duality of being and existing seems to advance the analysis of statements such as (4) and (5). In this sense, Gandalf is a powerful wizard, and Sherlock Holmes lives on Baker Street, but neither Gandalf nor Holmes exist. This interpretation, within a possibilist framework that emphasizes reality and, at the same time, the non-existence of fictional objects, was proposed by Alexius Meinong and thus is given the name Meinongianism.

Meinongianism took Brentano's idea of the "non-existent" in which everything we can mentally conceive – think, desire, believe – achieves a certain state of reality (Norris, 2003, p. 229). Meinong takes this concept even further in his Theory of Objects (1904), making it clear that we can declare any object non-existent, possible or impossible, true or false: these are so-called merely fictional objects (Berto, 2008, pp. 205-207). These types of objects are real, more or less concrete, but non-existent. Therefore, from this perspective, fictional characters seen in (4), (5) and (6), Gandalf, Holmes and Pegasus, can be established as true or false, as well as merely conceivable things, even with impossible existence, such as the so-called "squaring the circle" problem.

In a more modern Meinongianism (represented today by Parsons, 1980; Zalta, 1988; Jacquette, 1996 or Berto, 2008), merely fictional objects divide into nuclear and extra nuclear properties. Nuclear properties are those that essentially represent the object, while extranuclear properties are not

essential for its conception. So, for Gandalf, nuclear attributes would be "wizard," "wise" or "benevolent" and extranuclear ones would be all those linked to ontological matters "existent – non-existent" or modal statements "it is possible that – it is impossible that" (Berto, 2008, p.209). Thus, it becomes easy to identify merely fictional objects by their transfer through different texts: the essential Gandalf in the book *The Lord of the Rings* (Tolkien, 1954), the Gandalf in Peter Jackson's film trilogy (2001-2003) and the Gandalf in various video games, etc.…

In the same way and for merely fictional impossible objects, the same division applies: for the "squaring of the circle" problem, the attributes "circle" and "square" are nuclear, and all the rest are extranuclear.

Thus, Meinongianism facilitates the conciliation between what exists in our world – for examples, the ruins of the city of Troy – and what does not exist but that, in a certain sense, has real traits – fictional characters. In addition, it involves a theory that establishes natural harmony with common sense by letting one talk naturally of fictional objects without conflicting with their ontological ties: it matters little whether or not these objects exist or not in our actual world, what is truly relevant is the properties they display and how, using them, we can identify them.

However, the rise of Analytical Philosophy at the start of the 20th century would greatly challenge Meinong's approach. According to this school of thought, Philosophy cannot be studied from a metaphysical perspective but rather, must use formal logic and empiricism that presides over all research. In this way, point-blank positivism replaced all phenomenological notions.

One of the founding fathers of Analytical Philosophy was, curiously enough, a long-time follower and admirer of Meinong's Theory of Objects: Bertrand Russell. In his *Principles of Mathematics* (1903), Russell admits the possibility of a non-existent being through the previously mentioned example of the golden mountain. However, drawing on his essay *On Denoting*

(1905) and his Theory of Descriptions, the British philosopher directly rejected Meinongianism by considering merely fictional objects as contradictory and empty. For Russell, "there is only one world, the 'real' world (…) It is of the very essence of fiction that only the thoughts, feelings, etc., in Shakespeare and his readers are real, and that there is not, in addition to them, an objective Hamlet (cited in Dolezel, 1999, p.15).

One of the main problems with Russell's Theory of Descriptions is his difficulty justifying the impossibility of arguing something about merely fictional objects that also have certain meaning. In other words, if "the current King of France" is a non-existent or fictional being, then it is not possible to determine true or false values for possible statements. For example, the sentence "the current King of France is tall" is neither true nor false: it does not indicate as such, it has no referent and, therefore, it is not possible to confirm whether this statement is true or not. For Russell, fictional objects are "empty" terms from which nothing can be asserted. However, this theoretical declaration falls short of explaining how it is possible that "the current King of France," without existing, means something concrete and distinct from, for example, "the current Queen of Italy." That is, Russell accepts a certain level of meaning for non-existent fictional objects such as "the current King of France," but never explains where the knowledge of such concepts come from. Therefore, Russell's argumentative failure and the Analytical school of thought have both deepened Meinong's proposal and made it endure, even though in practice it remains a minority school of thought that is occasionally regarded as extravagant and ineffective.

On the other hand, Lewis' modal realism assumed the difficult task of explaining how fiction works without detracting from the ontological matter. This possibilist construction, as we have previously seen, aims to formulate the idea of possible worlds from the perspective of tangible human reality. Consequently, fiction poses an important challenge: either characters like Ulysses or Little Red Riding Hood truly exist and we enter the

extravagant belief that in another world parallel to ours, there are mermaids and talking wolves, or we try to understand non-existent entities from a different ontological perspective.

Lewis' response to this issue was categorical and surprising: his theory does not concern itself with common sense, but rather the advantages and disadvantages of its application. This response, popularly known as the "incredulous stare," is based on the idea that "Modal realism does disagree, to an extreme extent, with firm common sense opinion about what there is" (1973, p.133). As a result, Lewis does not try to evaluate if fictional worlds exist in the same way that other possible worlds do (Rosen, 1990, p. 329).

The singular approach of the American philosopher regarding the phenomenon of fictional worlds thus moves away from any ontological debate. It does not resolve the immanent doubts of Modal Realism regarding non-existent worlds, but rather its metaphysical analysis, outlined in the essay *Truth in Fiction* (1978), aims to confirm if statements about fiction can have truth propositions or not (Sainsbury, 2010, p.74).

In this text, Lewis deems that a sentence like "Sherlock Holmes played the violin" involves an implicit operator of the kind "In the stories of Sherlock Holmes…" This fictional prefix appears inserted into the communicative act itself, i.e. it is assumed by both the fiction writer and the receiver thereof. And, even more importantly for Lewis' purposes, the prefix determines a concrete possible world where things can be asserted from the truth proposition.

Therefore, the literal statement "Sherlock Holmes is a schoolteacher" cannot be subject to a truth proposition while the said subject does not exist in the real world. But if we assume that, in reality, the statement must be completed as "In the stories of Sherlock Holmes, Sherlock Holmes is a schoolteacher" then it is possible to assert its validity from the internal logic of this fictional world. However, according to Lewis, this statement

must be made as if it were a real or verified fact, and not mere fiction:

> "Storytelling is pretence. The storyteller purports to be telling the truth about matters whereof he has knowledge. He purports to be talking about characters who are known to him, and whom he refers to, typically, by means of their ordinary proper names. But if his story is fiction, he is not really doing these things." (1978, p. 266)

In other words, the stories Lewis speaks of are those where fiction is told as a known fact and not as an imaginary tale. On this point, Lewis' intent is clearly to separate our actual real world from the fictional one: the narrator's statements about Sherlock Holmes are told as known from that fictional world, though from the perspective of our world, this story is nothing more than a tale.

From this concept of story as a simulated act of storytelling, Lewis refines his implicit operator, from so-called Analysis 0 to Analysis 2. This evolution responds to an obvious problem: fiction does not end with the explicit but rather is made up of an immense set of implicit knowledge (Proudfoot, 2006, p.16). Thus, Lewis improves the prefix to include, first, the writer's most intimate actual world, and second, the cultural framework and most widespread beliefs at the time the author wrote the work (p. 272).

Lastly, Lewis uses his concept of counterpart to respond to the question: "If I make a video game or any other fictional object based on Doyle's *Sherlock Holmes*, then who is the Holmes present in my text?" According to Lewis, there is an original Holmes, who lives in Conan Doyle's text, who has a counterpart, i.e. his "quasi equivalent" in another possible world within the fictional text I have created, provided that my Holmes displays essential properties of the detective created by Doyle in his world. Both are Sherlock Holmes, but each one lives in his own fictional universe.

Today, Lewis' approach is one of the most supported (Hanley, 2004; Proudfoot, 2005, p.15; Sainsbury, 2010, pp. 75-82), in spite of the great amount of criticism he has received: essentially, the ontological silence and impossibility of believing in fantastical worlds that actually exist (Rosen, 1990), the non-existence of counterparts (Kripke, 1972 and 1980) and the need for their comprehensive revision (Le Gall, 2008).

Chapter 2

DO HOBBITS EXIST?

MIMESIS, FICTION AND NARRATION

"Librarian: 'Guybrush, is that French?' Guybrush: 'Actually it's fiction.'" — Monkey Island II: LeChuck's Revenge

Possible worlds in Philosophy have shown great potential when it comes to analyzing modal statements – the possible and the necessary – in relation to a world of clear reference. This fundamental referent or actual world has made it possible to confirm what relations exist between a starting situation and the compendium of possibilities that can be derived from it. All this seemed fully operative until fiction came along.

In fact, under the criteria of referentialist modal logic, little or nothing can be said about those worlds populated by elves, hobbits, dragons and supernatural beings. The reference and thus the value of truth propositions, no longer operates as a central axis for the creation of the world, since it simply does not exist in the realm of fiction. Or, at least, not from the empirical-mathematical vision of contemporary Philosophy.

As a result, major theorists in the study of fiction have dismissed the literal transfer of possible worlds in Philosophy, especially those originating from the Analytical school of thought, and have chosen a reinterpretation more appropriate to the cultural nature of fiction and better connected to literary textual semantics (Dolezel, 1989, p.229; Eco, 1979, p.172-176).

Consequently, from the theory of fiction, the specific possible world made up of non-existent entities or states traditionally has been called, the *fictional world*.

In this second subsection of the theoretical framework, and after the conceptual revision of the possible world in its philosophical origin, we will create an approach using one of its most peculiar derivations, the fictional world, from the theory of fiction. To do so, first we shall attempt to establish and clarify the meaning and scope of some of the most extensive and complex essential concepts of fictional theory: mimesis, fiction and narration. It is common to confuse them and mix them up, causing a series of conflicts more related to the terminological sphere than any other area. This is the case, as we shall see later, for the debate between Narratology and Ludology in video games. Second, and after our conceptual grounding, we shall proceed to outline the characteristics and main features of the so-called worlds of fiction, or fictional worlds, especially from the extensive contributions of literary theories.

2.1.- THE DELIMITATION OF MIMESIS

Throughout the centuries, concepts of mimesis and fiction frequently have been used. The first case has been used as an academic synonym for imitation or representation, while the second, according to the more or less pejorative rules of fictional discourse, has been likened to actions such as pretending, deceiving, imagining or simulating. In other words, in both cases, the usage of such terms has been widely spread but their semantic definitions remain quiet ambiguous.

Mimesis is the product of the famous philosophical conflict between Platonic skepticism and Aristotelian optimism. For Plato, the mimetic function is based on the copy of reality, the reproduction of our world. And because this reproduction is, in fact, an imitation of appearance, then every mimetic function involves deception. Thus, for the author of the *Republic,* all

judgments about mimesis are, in reality, moral judgements (Rodríguez Pequeño, 2008, p.113).

It seems difficult to understand Plato's position without taking into account the social and political conditions of the time. After a brief period as a slave, Plato created a political theory of the ideal polis in which virtue and justice should preside over political action and, thus, a caste of philosophers emerged as a more appropriate ruling class. Thus, the actions of the government would be ruled by true knowledge, and far from any ignoble or harmful action: the philosopher stands as the true authority, while the imitation of any other behavior, such as what occurs in theater or poetry, only entails social perversion. However, Plato, aware of the impossibility of completely eradicating mimesis, instructs children to imitate the core values of superior men from a young age (*Republic*, III, p.395). As a result, he links the idea of mimesis to copying reality with the intention to deceive: for example, the poet who poses as a dramatic character tries to cajole the audience by equating the imitation with the imitated, opening the doors to a confusion of values, and contaminating and perverting the morals of the people.

On the other end of this theory is Aristotle, Plato's discipline and friend. According to him, mimesis is neither a copy of reality nor a relation of similarity that tends towards deceit, but rather a process of creation in which "it is not the function of the poet to relate what has happened, but what may happen – what is possible according to the law of probability or necessity" (2000, p.56). This process, marked by artistic meaning, places human action as its main subject, and as its main objective, the configuration of a fable (*mythos*) or "structuring of events" (Ricoeur, 1980, p.57) that fulfills the principle of verisimilitude whenever possible[1]. For Ricoeur, the Aristotelian concept is more of a creative process than a translation or reflection of

1. As Garrido Domínguez (1996, p.28) notes, for Aristotle, mimetic work also involves that which is impossible as long as it is believable. Thus, that which is plausible is not

reality: the development starts with Mimesis I, the "beforehand" determined by the producer's ability to create a Mimesis II, or the proper configuration of the work, and ends with Mimesis III, the "afterwards" of artistic composition in which the role of the receiver is determinant. Thus, mimesis, far from a mere relation of similarity, becomes a transition of a new fictional reality (Mimesis II) from a creative concept (Mimesis I) to a reconfiguration of the work during reception (Mimesis III).

As a result, Aristotle considers that humans, from a young age, make use of this mimesis to learn, such as a child who imitates his father while fishing. Imitation, unlike the Platonic vision, does not imply an empty, sterile and often harmful and contaminating imaginary act, but rather a natural channel for human learning and the main vehicle for society's cultural uses. In other words, mimesis lets us learn to use an axe to chop down a tree, but also enables the expert to transfer that knowledge from generation to generation without it becoming lost.

The Platonic and Aristotelian views not only have gained important influence over time, but also have complicated the meaning of the term imitation (Pavel, 2000, p.527). Nowadays, imitation easily tends to be confused with fiction, deceit, simulation or representation, and it seems difficult to draw broad outlines among all these concepts. In this context, Jean-Marie Schaeffer (2002) has attempted to systematize the features of different mimetic signs and has proposed a very illuminating typology.

For the French philosopher, the mimetic function can be classified into five large groups, distinct in application and complexity: mimicry as a function of deception, "mirroring" behaviors, observational replication, observational and social-based learning and, finally, the phenomenon of simulation (p. 62).

necessarily linked to the ontologically referential but rather to the acceptable in the context of the mimetic process.

Mimesis as a tool of deception (*mimicry*) is the axis on which Platonic criticism pivots and is one of the most common methods in the animal kingdom. In its most primitive variation, deception occurs in the evolution of species – for example, the wing coloring of certain butterflies mimic the eyes of birds of prey, the natural predators of the birds that feed on them – or as a reaction to an environment – as in the case of chameleons and their ability to camouflage. At the most complex level of deception, we find the behavioral disposition by which animals voluntarily perform a specific act to mislead a predator. In the latter case, the most capable being is certainly man, since his ample learning capability lets him design truly complex strategies of deception, even to the point of lying, the true linguistic manifestation for misleading. As Schaeffer rightly detects, deception involves an advantageous position for one of the parties, who performs the mimetic function of misleading, thus creating an asymmetry that does not occur, for example, in fiction.

"Mirroring" behavior corresponds to those innate and, thus, non-voluntary movements, such as yawning after somebody performs the same action, while both observational replication and different types of learning involve a selective act based on the will of the one imitating. In these latter cases, observation and learning set forth this active orientation within very different scopes. In other words, a mere replication based on observation – for example, the monkey that sees another break open a coconut and does the same – supposes that the one imitating feels compelled to perform the same action to confirm the same result – the coconut opens and the animal can feed himself. Only when such replication is part of a broader process of internalization is when we can speak of learning. Thus, observational replication may be limited to the replication of one action or consist of another essential element other than the third mimetic delimitation: individual or societal learning. It is also important to note that the mechanics of learning surpass mere imitation and establish greater freedom for behavioral

patterns: the monkey that learns to break open coconuts should not necessarily repeat the same sequence of actions, but rather can add new ones – throw the coconut from a tree, use a sharp rock to open it, etc.

The final category suggested by Schaeffer moves away from deception and learning to delve into the idea of simulation, i.e. the modeling of a concrete reality. In this case, the essential properties of a reality, physical or virtual, are taken, and used to create a new space that may be abstract, such as the mathematical models of a ship's wind resistance, or physical, such the construction of a ladder on a ship. Simulation ensures, on one hand, a safe space of experimentation, far from the costly consequences of its application to a simulated object and, on the other hand, it is a very powerful tool when it combines, for example, the previously mentioned learning processes.

As a result, Schaeffer proposes three broad types of relations when speaking of mimesis. First, mimesis understood as a literal imitation or copy, whose main model is observational replication and, where appropriate, observational learning. Second, mimesis conceived as pretense or attempting impersonation – deception is a good example of this, if not the only example. Finally, mimesis linked to the representation or creation of a mental or symbolic model based on its resemblance to reality. In the latter case, both simulation and the mental process involved in learning appear as clear representatives.

2.2.- FICTION AS LUDIC PRETENSE

The mimetic function of pretense in contrast to deception is, as previously mentioned, the main axis of criticism from the Platonic view: pretense implies impersonation of the real and, as a result, the temptation of deception emerges. Additionally, the confusion between the real and the imagined may lead to the transmission or contamination of the wrong values.

In fact, the Platonic view has fundamentally collaborated in the construction of a negative and prerogative evaluation of the concept of fiction throughout the centuries: pretense is likened to deception, and both concepts to the idea of fiction. Thus, the fictional is equated to deceptive pretense or to mental confusion that makes the receiver believe that the imaginary is real. This perception of fictional fact offers powerful examples even today, especially with the criminalization of popular media – film, television and video games – and the transmission of harmful values, generally related to violence and sex. What is more, the history of fiction is a history of social discredit.

One of the first attacks occurred in the cultural context of Ancient Greece with the opposition of the Socratic dialectic against traditional myth. For Socrates and later Plato, the myths constructed by oral tradition were enshrined in magical power and the constant confusion between the real and the fantastical that fascinated the community (García Prada, 2001, pp. 229-230). Before this discursive form, philosophers imposed the dialectic, syllogism and the maieutic as tools in service of the argument's logic: it was necessary to end the magic of the word and ontological confusion so it firmly took hold in humans. Its consequences are well-known: the elevation of so-called rhetoric relegated fiction to a kind of ideological ostracism when it was used with propagandistic ends by medieval nobility and, to a larger extent, by religions. At best, the fiction manifested in popular art did not have the least importance from a discursive perspective. In other words, imaginary constructions could only be constituted as weapons of manipulation or as simple and banal entertainment.

However, the hegemony of the argument soon declined upon the confirmation that, in reality, much of the ideological persuasion did not consist of the mere fictionalization of reality, but rather the intensive use of rhetoric focused on manipulation and deception: if the downfall of myth avoided the mistaken belief in the magical, the collapse of the argument showed the society's

mistrust of the elite's words. In this way, and with the rise of the scientific method of rationalism in the 17th century, the metaphysics and deduction established in the Greek system gave way to a more stable and secure empirical induction within fields such as physics and mathematics: unpredictable human thought yielded its dominance to science as the only feasible truth.

In this context, fiction no longer competed for the second position, but rather had to conform to the third. And thus Descartes' "I think, therefore I am" powerfully declared the attention Analytical Philosophy would dedicate to the discourse.

Dolezel (1999) has emphasized this ontological and referentialist perspective of the mimetic concept as one of the main hurdles for conceiving a truly satisfactory theory of fiction. The isolation of Analytical Philosophy in relation to other knowledge areas intimately connected to fictionality – literary theory, semiotics, anthropology – implies interpretations that have little to do with the imaginary as a cultural force and that instead focus on fitting fiction into a logical-referential framework far from its natural character. From this perspective, Dolezel criticizes theories of fiction inscribed within the framework of one single world, i.e. those theories that understand that "there is only one legitimate universe of discourse (domain of reference), the actual world" (pp.14-15). One the one hand, these are theories of null reference and, on the other hand, they consist of exclusively reproductive mimesis.

Theories of null reference have been previously seen with Russell and, according to Dolezel, would be broadened with Frege's pure sense and Saussure's self-referentiality (pp. 16-20). If for Russell, fiction consists of empty terms without reference and, thus, without truth propositions, for Frege the fictional must be understood by the distinction between reference (*Bedeutung*) and sense (*Sinn*): a character like Sherlock Holmes does not have reference, but rather sense, a meaning deduced from the formal construction of the text. But as Dolezel aptly notes, it seems difficult to defend a sense, a meaning or representation of

something, when the object – reference – does not exist as represented (pp. 17-18).

Faced with this paradox of meaning without representation, Ferdinand de Saussure proposed an active and internal referentiality, far from the relation between meaning and reference, and associated with the signifier/signified axis. Or, in other words, he believed that linguistic expression is essentially self-referential. But for Dolezel, this approach is not convincing either: the Saussurean approach does not resolve the conflict of a semantics of fiction without reference and its integration into a larger category – linguistics – is not satisfactory either.

The second great obstacle to theories based on a single world consists of the productive mimesis or the Platonic view of fiction as a simple reflection of the real world (pp.20-26). For Dolezel, the transfer to fiction occurs, first of all, from a real prototype to a fictional entity:

the fictional entity E (f) represents *the real entity* E (r)

This is the case of the historic novel in which, for example, Napoleon in a text or a movie consists of a fictional entity of a real prototype, or a real entity that assumes the historical Napoleon. However, issues arise with this approach when it confronts fictional entities without clear referents. Who is the real entity that Gandalf is based on, or Ignatius J. Reilly, the grotesque protagonist of *A Confederacy of Dunces* (Kennedy Toole, 1980)? In this case, it creates an interpretative detour that, in the absence of a real entity, the mimetic theory attributes as a real universe: the fictional entity is constructed as a typical representation of different group attributes. Thus,

the fictional entity E (f) represents *the real universe* U (r)

To exemplify this, Dolezel cites an essentially universalist interpretation of Quixote made by Erich Auerbach (1957) in which "not only Sancho but also Don Quixote appear as people

representative of contemporary Spanish life… Sancho is a peasant from La Mancha and Don Quixote a small provincial landowner who has lost his senses" (p.22).

Thus, it follows that the insistence of the concept of fiction as a mere translation of a specific or universalist referent cannot account for the true properties of fictional entities. In other words, speaking of a fictional entity as equivalent to the real prototype or set of values says little to nothing of the true nature and potential of fictional characters. In this way, and as we shall see later, the only way out is to overcome the single world framework and support a model of possible worlds.

In any case, nowadays it seems that fiction not only has survived all these single world interpretations but also its discursive potential has returned in full. Recent decades have shown that exclusively rational discourse does not allow the explication of everything and the promise of a stabilized and secure world thanks to science is not possible. Thus it seems that,

> "We can no longer be, at the same time, ourselves and he who transcends himself. The only solution to this inaccessibility to ourselves is to embark on an imaginary or fictional discourse by which we can make 'imaginative variations' on alternative possibilities of being. Fictionalization, says W. Iser, 'begins where knowledge ends, and this dividing line becomes the source from which fiction arises, by means of which we extend beyond ourselves'" (García Prada, 2001, p. 249)

Returning to the Platonic idea of fiction, and if we dismiss that which regards pretense as deception or a model of mental confusion, the question that arises is obvious: "What then is fiction?" We can define fiction as ludic and shared pretense that develops within a given semantic-pragmatic framework. We shall look at each of these characteristics.

According to the previous synopsis, one of the categories proposed by Schaeffer is pretense, or how imitation impersonates the imitated, deception being one of its most

common manifestations in the animal kingdom. This deception climaxes with human language and our broad ability to adapt to different circumstances. Thus, for example, we can feign sadness by verbally communicating and relying on clear physiological symptoms, such as crying or body language.

But not all pretense necessarily involves deception or "serious" attitudes. We can pretend without the aim to deceive and with the sole objective to guarantee access to an imaginary and ludic universe. It is "the fundamental difference between lying and inventing a fable, between usurping the identity of another person and embodying a character, between tampering with a press photograph and making a photomontage" (Schaeffer, 2002, p.83). This "as if" derived in a fictional framework differs from "serious" pretense insofar that it does not try to pass things that are not true for truth, but rather aims to create a space of its own meaning.

Children's games are an easy example of humans' ability to produce spaces of fictional immersion. For Walton (1990), current fictional manifestations – literature, film, video games – are elaborate extensions of children's games, like playing mom and dad, or with doll houses. The objects involved in such games – tea cups, teddy bears – are not intended, in any case, to create deception among participants. Children do not play so that others believe that, for example, teddy bears are truly alive when they are not. Children assume a psychological-imaginative game according to which they pretend that the bear is alive, or that the cups are full of tea. Children do not pretend "seriously," they pretend in a "ludic" way[2].

2. As Schaeffer notes (2002, p. 129, footnote 21), for Austin (1994) ludic pretense is a parasitic form of serious pretense, i.e. a structure that only exists at its expense, and that therefore must be disposed of. We must consider here the unfortunate use of the term "serious" to define this type of pretense, since it implies a strong ambiguous weight. Ludic pretense is not serious in such a sense, i.e. with the intention of making the receiver believe that the imitated is real. But instead, if it "must be taken seriously" in ludic terms, then its potential must be defended not only as a learning tool but also a true forger of individual and collective imagination. Thus, it would be more

However, it could be the case that one of the children, immersed in the fictional game of serving tea, gives an empty, but fictionally full, cup to another child who, baffled, does not continue the game. In this case, the first child is developing a role within ludic pretense, while the second has not managed to enter it. And this occurs due to the absence of intersubjective agreement between the participants of the fiction: ludic pretense is not possible without a certain shared pretense framework. Thus, children play because they agree on the type of fiction and the rules that govern it in the same way that the viewer assumes the cinematic discourse by consenting to the famous "voluntary suspension of disbelief" (Coleridge, 1975). Thus, fiction consists of establishing a ludic type of pretense determined by shared and accepted norms of all participants.

Finally, it is possible to understand that the illusion furthered by this ludic and shared pretense must be produced within the scope of a given semantic-pragmatic framework. The "rules of the game" of the fiction must be based, as previously mentioned, on the agreement between all parties in order to work properly. These agreements are inscribed in what the Philosophy of language has called pragmatics, i.e. the cultural context in which fiction is inserted. In fact, it becomes essential for understanding what separates fiction from non-fiction, to the point that some authors consider it the central axis of textual fictionality (Levin, 1976; Schmidt, 1976; Iser, 1987; Schaeffer, 2002,) or link it closely with the conventions of Austin and Searle's acts of speech (Woltersdorff, 1989; Adams, 1985). Thus, the pragmatist understands that the difference between an act of fiction and a real act does not lie in the intrinsic properties of the text, but rather the cultural context in which the creator and the receiver are located. This position would explain, for example, the passage of Troy in the Trojan legend depicted by *The Iliad* or how it is possible that the ancient religious myths once considered real are today, in most cases, fictional stories.

illuminating to distinguish these categories by negation: ludic pretense and non-ludic pretense.

Therefore, Thomas Pavel gives an example of to what extent the distinctions between the fictitious and the real are difficult to maintain. In his work *Fictional Worlds* (1986, p.77), he explains the case of an anthropologist working in Maramuresh (Transylvania) who discovered a beautiful folk legend. In it, the story goes that a young man, a few days before getting married, met a fairy who lived on a mountain near his village. The fairy, jealous of the boy's upcoming nuptials, could not contain her impulses and, in a fit of desperation, pushed him off a steep cliff. The next day, a group of shepherds found his body in the underbrush, returned it to the village and there, the inconsolable bride sang a funeral hymn.

The anthropologist investigated the origin of this legend by talking with the people in the village and discovered, to his surprise, that the events described occurred just 40 years ago and the bride was still alive. It was the bride herself who told him her version of the story: the groom suffered an accident, a stumble at the top of a cliff and, after falling, his screams of pain drew the attention of a group of shepherds. He died upon arriving in the village.

But the most surprising thing occurred after the anthropologist returned to the village in question. There, the villagers believed that the disappearance of the jealous fairy character from the bride's story was an oversight, psychological trauma that had forced its disappearance: the legend was real while the woman's testimony was a lie based on self-deception. The anthropologist concluded his investigation with the following reflection: "Was not the legend much more truthful than the real story as long as it gave the story greater depth and richness by revealing a tragic destiny?"

Pavel's example clearly shows how fiction has an eminently cultural dimension: fiction is what is understood as such in a given social and political context. And, thus, its boundaries with the real are not only revisable with time, but also can become extremely blurred.

However, pragmatics does not manage to exhaust the entire spectrum of fictionality. Pavel himself believes that "fiction is both a pragmatic and a semantic notion, since the organization of cosmological space obeys pragmatic reasons, while the structure itself is clearly semantic" (cited in Dolezel, 1999, p. 29). From this perspective, fiction is not exclusively associated with a contextual-pragmatic question, but also has a textual-semantic dimension.

The semantic position does not negate the importance of pragmatics as an intersubjective agreement, but emphasizes the relevance of the properties and characteristics of the characters and objects inserted in fiction, especially for those without a real referent (Martínez Bonati, 1983; Jacquenod, 1988; Albadalejo, 1998; Dolezel, 1999). Semantics maintain that fiction, far from restricting itself to a mere imitation of the real, consists of a true space of autonomous creation in which the validity of truth propositions uniquely refers to an internal matter: the London in Dicken's novels is just as fictional as Rivendell in *The Lord of the Rings*. This perspective considers that the exclusivity of pragmatics, the restricted understanding of the context of production and reception, would lead us to the mimetic reductionism proposed by Dolezel and the elimination of the sign-world axis to focus only on the sign-user axis (p.27). Thus, speaking of the text only from context implies denying fictional entities in favor of real prototypes, or the existing or known universal values in the context in which pragmatics operate. In contrast, the study of the text from semantics assumes a richness from the perspective of the so-called intensionality of the text.

Intensional semantics refer to the "texture" or aspect that meaning has in the text itself, thus evaluating the fictional entity over universal prototypes and values. Thus, and immersed in Frege's distinction between reference (*Bedeutung*) and sense (*Sinn*), Dolezel understands that fiction, as long as it is autonomous from reality, defines purely intensional objects,

since they are determined by "forms of expression rather than by a referential relationship" (1997, p.95).

It is evident that the intensional perspective does not deny, in any case, the participation of extensional or referentialist semantics, also known as world semantics (Albadalejo, 1998, p.19), which deal with those relations of meaning between a referent and its textual manifestation. However, intension considers any fictional entity, whether with a real or non-existent referent, as participating in an autonomous and ontologically distinct space from the real world: its existence and construction can only be seen under the protection of fiction itself. Thus, from the semantic perspective, the realistic novel is as fictional as the fantasy genre: Mozart in the film *Amadeus* (Milos Forman, 1984) as well as John McClane in the movie *Die Hard* (John McTiernan, 1988), Julius Cesar in the series *Rome* (Bruno Heller et al., 2005) as well as Sheldon Cooper from *The Big Bang Theory* (Chuck Lorre and Bill Prady, 2007).

In this way, we consider that fiction, as ludic and shared pretense, must be located in a hybrid and integrated position between both stances. Thus, all fictional construction is necessarily an offshoot of a given pragmatic framework that, to a certain extent, can change it but, in turn, constitutes a true meaningful space, autonomous and filled with characters, objects and relations that must be claimed as such.

Lastly, it is necessary to define this idea of fiction from another extremely similar and occasionally assimilated concept: narration. Thus, in the following subsection, we shall aim to answer the following question: "What differentiates fiction from narration?"

2.3.- NARRATION, BETWEEN STORYTELLING AND RETELLING

Popularly, narration is understood as the act of retelling a real or fictitious event. In other words, narration involves explaining a story.

However, Narratology, an idea attributed to Todorov (López Izquierdo, 2009, p.102) that refers to the science of storytelling, has created a more complex concept of the act of narration through the contribution of different perspectives, the most characteristic being Russian formalism (Eikhenbaum, 1992; Tomashevski, 1982 and 2004; Propp, 2000; Shklovski, 1992 and 2004), the French school of thought (Barthes, 1972; Bremond, 1973; Genette, 1983; Greimas, 1987; Metz, 1968) and the Anglo-Saxon school of thought (Chatman, 1990).

Russian formalism, composed of a myriad of heterogeneous theories and studies, consolidated a key distinction to determine what narration is. Thus, within the framework of narration studies it differentiated between *what* is told, the fable, and *how* it is told, the subject or syuzhet. In this way, the syuzhet is the order of actions and objects – "motives" for Tomashevski – which are presented to the reader in a book or the viewer in a movie and that will lead to mental configuration of a chronologically ordered story.

In the mid-twentieth century, French structuralism – strongly influenced by Lévi-Strauss' anthropology and Saussure's linguistics – adopted the formalist distinction and gave it new content. Thus, Todorov (1972, p. 157) distinguishes the history of discourse, the meaning of the signifier, comparing the former with the fable or the narrative structure, and the latter with the syuzhet[3] or discursive structure (Eco, 1981, pp.145-146). In the same way, the syuzhet has also been called the plot (Chatman, 1990; Bordwell, 1985b) or the story (Genette, 1983; Metz, 1968).

However, it would be Genette who broadened the two-part distinction between story and discourse to three elements, after considering it insufficient. Thus, while the story is composed of content, narration is the process or the act of stating such

3. However, for Todorov and unlike the formalists, the story does not construct discourse, the what does not come before the how, but rather the only thing that exists is the text and only from its interpretation can the story emerge (López Izquierdo, 2009, p. 101).

content in the history of the story, the latter being, thus, the final result of the process: an authentic "narrative statement" (1972, p.81). From this three-part distinction – story, narration and text – we can understand the idea of narration broadly as "the producing narrative action and, by extension, the whole of the real or fictional in which that action takes place" (Aumont, 1996, p.109) and the text as a "chain of situations in which events occur and where characters move in specific environments" (Casetti and Di Chio, 2007, p.154).

On the other hand, Marie-Laure Ryan has recently defended the creation of an essentially transmedia Narratology that argues that the idea of narration with linguistic origins is too closed-minded (2006, pp.4-6).

Thus, the American author criticizes Genette's idea (1972) – also shared by Prince (1982) and Chatman (1990) – by which all narration, as an act of enunciation, is based on a narrator who tells something to a listener. From a literal interpretation, this position would exclude those cases in which the narrator does not exist or, at least, does not explicitly appear: for example, movies in which there is not, for example, a voice-over that accompanies and sets up the visuals. In the same way, Ryan – following the approach of Bordwell (1985b) – rejects the moderate version which speaks of a narrator in visual arts, even through the conception of an implicit figure: while all narration implies a statement, it is always necessary to shape a narrative authority, even from a theoretical standpoint, a narrator who has something to tell (Gaudreault and Jost, 1995, pp. 67-69). Ryan's theorizing would involve thinking of narration from a more cognitive and progressive perspective: the act of narration is "scalable" or gradual and thus it is not limited to linguistic expression. Thus, fictional context is just as narrative – Tolkien's Middle Earth – as temporal properties, or formal and pragmatic matters. From this point of view, the narrative does not consist of telling a story, but rather a form of expression that can reach different levels of narrativity. In the same vein, for Jenkins

(2006b) this type of narrative would respond to the demands of media convergence in which the type of story "unfolds across multiple media platforms, with each new text making a distinctive and valuable contribution to the whole. In the ideal form of transmedia storytelling, each medium does what it does best — so that a story might be introduced in a film, expanded through television, novels, and comics; its world might be explored through game play or experienced as an amusement park attraction" (p.101).

However, this approach to transmedia narration involves an important problem, and it runs the risk of distorting the concept of narration by extending its application to practically every form of expression: a literary text is just as narrative as a fictional framework, an abstract painting or a board game. Therefore, it falls into a literal comparison between narration and fiction. That is to say, if narration is a matter of degree and not of enunciation, then in its maximum degree – of fictional contexts – it is not possible to distinguish between fiction and narration: Middle Earth is fiction and, at the same time, narration.

As Jenkins notes, it is true that each medium must tell the story according to its particularities, but also not all movement between different mediums necessarily involves the telling of a story. In other words, Matrix's comics participate in a transmedia narration in which they tell a story in a different medium from the original – the cinematic story – and that, in turn, inserts itself and collaborates in expanding a specific fiction: the world evoked in the movie (Laurence Wachowski and Andrew Paul Wachowski, 1999). But, do board games truly tell a story inspired by the saga?

Thus, independently of the debate on the narrator issue, it becomes more convenient to think of narration not as an open concept that encompasses all forms of expression, but as a stated act in which, through a discourse or configuration of events in a given order, achieves a chronologically ordered story. As we can see, this theoretical definition implies a set of differences,

some more obvious than others, regarding what was previously proposed for fiction.

1.- *All fictional narration produces fiction, but not all fiction contains narration.* This first distinction is very important, since narration or narrative text is commonly compared with fiction, as we recently saw with the transmedia issue. To start, we must keep in mind that not all narration is fictional (Eco, 1981, pp. 151-152): a journalistic chronic articulates a discourse and evokes a story, but does not imply the intention of pretense – whether seriously or ludicly. Instead, it is placed on the so-called non-fiction level, while a photograph may occupy either level according to its purpose. In other words, the fictionality of narration does not belong to one medium, but rather is determined, as we have seen earlier, by different pragmatic-semantic criteria.

On the other hand, the transition from fictional narration to fiction is not necessarily interchangeable, i.e. fiction does not always entail or include narration. Such is the case, for example, of fictional non-narrative mediums of expression, such as certain visual works or board games based on specific fiction: Mondrian's paintings produce fictional spaces in which a story is not set forth – or at least not from textuality – while in chess or the version of monopoly for the cartoon series *The Simpsons* (Matt Groening, 1989), it is not constructed as a story but rather a fictional system of play with characters from a popular television program. In the same vein, Ryan considers the postmodern anti-narrative novel as a good example of non-narrative fiction (1991, p.1). Thus, fiction is constructed as a broader space that may include, though not necessarily, one or several narratives. This does not prevent or deny the fact that these narratives produce fiction – common in literature and film – that make up the essential and widespread semiotic channel for accessing them, but rather it reinforces the idea that narration and fiction are not always necessarily linked.

2.- *Narration evokes stories, fiction can be composed of stories and overcome their limits.* The novel *The Lord of the Rings*, from the

perspective of storytelling, presents us a series of situations and characters that evoke different stories[4]. Thus, the reading of the story lets us reconstruct the history of Frodo's journey to Mount Doom, or Gandalf's fight against Balrog on the summit of Moria. In other words, different stories entail different histories. However, the field of Tolkienian fiction does not appear limited by the adoption of certain stories, but rather encompasses a much larger space, full of cohesive gaps – we assume there is a monetary, legal system, etc.… even though it is never made explicit – and unanswered questions that mark the vagueness of their boundaries: Where do the protagonists go to at the end of the story? What happened during the years that separate *The Hobbit* (Tolkien, 1937) and *The Lord of the Rings?* What happens in the rest of Middle Earth while the War of the Rings is taking place? Thus, while the stories create specific histories, fiction makes way for semantic aggregation and significance. Frodo's story is not built by Middle Earth but it participates in its construction, and only through the combination of different stories does a larger fiction come into shape. Moreover, these great fictional stories occasionally overcome boundaries suggested by the author himself by producing completely different pragmatic-discursive frameworks: the culture of participation, exemplified in the fan phenomenon (Gray, Sandvoss and Lee Harrington, 2007; Jenkins, 2006), that involves an expansive focus of fictional content on the Internet that escapes the construction of the author's narration. Thus, it is common for fans to populate the galactic universes of sagas like *Star Trek* (VVAA, 1966-2005) or *Star Wars* (George Lucas, 1977-2005) with new characters, weapons and planets without ever taking over the original stories of these fictional stories.

4. It is important to emphasize that the shaping of stories does not have to start with the linear logic of classic storytelling. Thus, contemporary culture has introduced new discursive forms such as non-linear narrative in the form of hypertext (Landow, 1997) or popular modal narratives (Cameron, 2008) in movies like *Memento* (Nolan, 2000) or *Pulp Fiction* (Tarantino, 1994) in which an extreme disassembling between story and discourse is produced.

3.- *Narration has an end, fiction implicitly remains open-ended.* Every story, also in its minimal expression as a transformation of "two successive and different states" (Courtés, 1997, p.100), has a beginning and an end (Gaudreault and Jost, 1995, pp.26-27; Metz, 1968, pp.25-35), even in those cases in which narratively the story has a so-called open ending: ultimately, all books have a final page, all movies close with a final frame. In contrast, the expansive nature of fiction and its potential to accommodate original stories, and derived or complementary stories, make it impossible to speak of a definite or determinate closing. This explains, on one hand, the close link between discourse and story in narration – the dependence and significance that emerges between them – and on the other hand, the true potential of fiction.

2.4.- THE CONCEPTUAL INTEGRATION OF MIMESIS, FICTION AND NARRATION

The terminological distinction between mimesis, fiction and narration cannot be limited to a personalized study without being observed from the broader perspective of the communicational act. In this sense, Ricoeur's concept of mimesis as an act or process of creation with three phases lets us analyze the existing relations between these concepts while respecting the semantic-pragmatic framework of its creation, circulation and consumption (Figure 1).

Thus, in the phases of preconfiguration (Mimesis I) and reconfiguration (Mimesis III) – the creation of the work by the author and the reception, respectively – generally operate as the pragmatic framework of the conceptualization of fictional fact, together with an extensive type of semantics. Conversely, in the configuration phase (Mimesis II), the fictional framework is governed mainly by logic based on intensional semantics, without damaging the role that the issue of extension may play in each specific fiction. Additionally, it is important to note, in accordance with the previous distinctions between narration and fiction, that the fictional framework is always present, whereas

narratives, such as stories (N1, N2, Nn), will exist according to the semiotic configuration of the medium in question and the ontological needs for the creation of fiction. We shall see this with a recurrent example in this work.

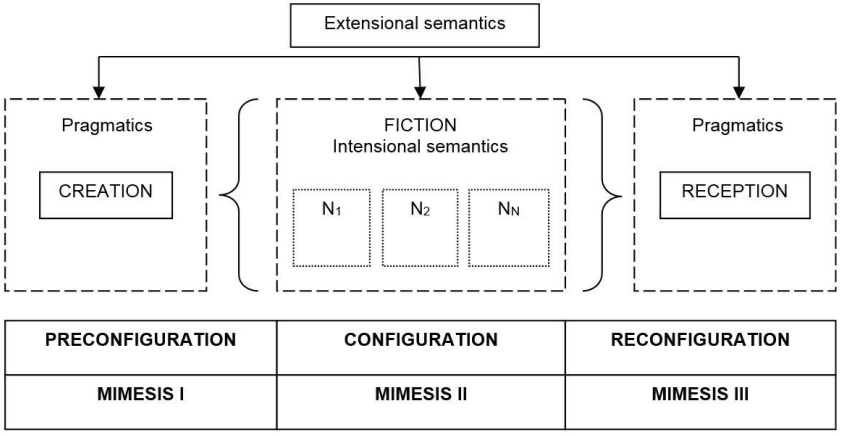


Figure 1. Semantic-pragmatic model of fictional worlds.

The Lord of the Rings is considered J. R.R. Tolkien's masterpiece. Written between 1954 and 1955 and published in three volumes, the saga tells the stories of a group of heroes that must accompany Frodo, a hobbit from the Shire, on a quasi-suicidal mission: he must go to Mount Doom, the heart of Mordor and Sauron's dwelling place, where he will destroy the One Ring, an artifact of great power designed to enslave all the races of Middle Earth.

The work, written as a sequel to *The Hobbit*, appears in a very specific pragmatic context and is shared by both the author and potential readers: all of them consider it a work of fantasy, a work of fiction. This aspect is especially relevant if we keep in mind that one of Tolkien's aims was to give Great Britain its own mythical context, even if it were strongly influenced by Finnish myths and Catholic traditions. In other words, Tolkien creates a myth at a historical moment in which mythology is no longer considered a realist construction but rather essentially fictional,

since mid-twentieth century society reads the mythological texts outside the area of non-fiction. This pragmatic situation in preconfiguration and reconfiguration thus implies that the work is written as fiction and read as fiction. At present, it continues being so, even when this fictional framework has become a transmedia fictional framework by circulating, with its own particularities, in cinema, theater and radio.

The configuration of fiction uses the classic model of linear storytelling. The books set forth the journey of Frodo and his hobbit friends, the creation of the Fellowship of the Ring in Rivendell, the loss of Gandalf in Moria, the battles of Helm's Deep, Isengard and Minas Tirith and, finally, the ending at the peak of Mount Doom and the farewell journey to Tol Eressëa, near Valinor. Each one of these stories and, consequently, each of the histories they evoke, collaborate in the configuration of a greater framework. We know the extent of Middle Earth from the travels of the Fellowship of the Ring, and the racial conflicts from the relationships between characters. Additionally, Tolkien's richness in the description of scenes and fantastical beings creates a very powerful "texture" or intensional semantics. Thus, hobbits, non-existent beings in our worlds, receive their own, specific identity – their height, hairy feet and cheerful and relaxed nature – that only we can know from the intension and configuration of fiction that the aggregation of different stories and textual logic provides us.

It becomes evident that these intensional semantics that describe what hobbits are like do not appear disconnected from extensional semantics. In other words, Tolkien explains the features of hobbits, those which belong to and are unique in that fictional framework, while he uses extensional semantics to drawn on our knowledge or encyclopedia (Eco, 1993, pp.26-31) for other essential but implicit elements, such as their humanoid form, the existence of eyes, a mouth and ears, or the need to breathe to survive. In other words, intensional semantics refers to what hobbits are like and what makes them unique, while

extensional semantics relies on the reader's knowledge to show those properties that are presumed basic and do not need to be made explicit (Albadalejo, 1990).

But the aspects that most fascinated readers, and provoked a flood of complaint letters to the South African writer's home address, were the existing gaps between the fictional framework and the stories that were not provided. Thus, while the books comment on the arrival of the five wizards or Istari, we know the fate of three of them: Saruman, Gandalf and Radagast. The other two are lost in the mists of fiction. In the same way, fans pestered the author with questions like "Why do the Balrogs have wings?", "What is the origin of the Ents, the tree shepherds?" and "Is Tom Bombadil, the mysterious character who saves Frodo's life in the first volume, God?"

All these questions entail enigmatic responses that escape the story itself and, therefore, the capacity of the narration as the unique model of construction for fiction. Thus, the fictional context surpasses the stories to produce, in the interstices of each one, new spaces of fictionality: the framework comes to life and expands the boundaries of the story towards a greater and more dynamic structure, as long as its foundation appears through the exposure and assimilation of a set of stories.

This structure already appears intuitively among philosophers addressing alternative realities to our own, and it takes on a special meaning when we refer to an autonomous and meaningful space in its own right. This structure, from a very anthropocentric perspective, is called a "world." We shall refer to the great vital framework in which stories are inscribed, among other elements, as "fictional worlds."

2.5.- FICTIONAL WORLDS AND THE INFLUENCE OF THE POSSIBLE WORLDS THEORY

In 1953, Étienne Soriau introduced the concept of diegesis (*diégèse*) to describe the universe in which different stories are

inscribed. Thus, the diegetic universe of Tolkien's work corresponds to what we have called so far a fictional framework, which was constructed, generally and notwithstanding non-narrative mediums, by the contributions of stories. This concept has been useful in the field of both literary and cinematic Narratology, not only to explain the internal coherence of stories, but in particular to determine where it is being told, whether from outside of the universe – the extradiegetic space – or from an internal narrative authority that reveals a second discourse – the intradiegetic space.

However, the fictional framework or diegesis has found a greater terminological fortune in the concept of fictional worlds and this is generally due to two reasons. First, and in comparison to the technicism of the diegesis concept, the idea of worlds refers to an easily assimilated mental construction by both authors and readers or viewers by establishing a measure of anthropocentric scale. Second, and in terms of the possible ambiguity of a fictional framework, the reference of a world allows the remarking of boundaries between that which belongs to that set and that which remains outside of it. Therefore, diegesis as a world may be conceived as the "ultimate meaning of the story: it is fiction in the moment it not only takes shape, but becomes a shape. Its meaning is broader than that of history, which it ends up encompassing" (Aumont, 1996, p.114).

As we have seen in previous sections dedicated to Philosophy, the idea of worlds does not originally emerge to define boundaries and frameworks in fiction as alternative spaces to the reality governed by the possible and/or necessary, i.e. as possible worlds connected to our reality. However, the revaluation of Leibniz and Lewis' work drew the attention of a group of literary theorists who saw in the philosophical model of possible worlds, a seed for the fictional semantics of possible worlds, at least from two key contributions: first, modal logic provided a more specific reinterpretation of the ambiguous concept of worlds, in this case, as a metaphor of an intensional semantic domain and

second, it added different modes of existence – the possible and the necessary – to objects, characters, states and events inserted in those fictional worlds. Addressing the world from its own semantics involves overcoming the formalist and structuralist framework of the study of texts and, by extension, its history, while allowing a new approach on the matter of fictional truth, referentiality and the potential of fiction at the transmedia level. Thus, fictional semantics of possible worlds is destined to ask pertinent questions in at least four different areas: the theory and semantics of fiction, the theory of genre and the typology of fictional worlds, narrative semantics and the construction of characters and, finally, the poetics of postmodernity (Ryan, 1992, pp. 528-529).

The approach of possible worlds was articulated, from this particular field of study, originally by Félix Martínez Bonati (1960), Lucia Vaina (1977) and Umberto Eco (1993) and subsequently by Walter Mignolo (1981), Benjamin Harshaw (1984), Thomas Pavel (1989), Marie-Laure Ryan (1991), Tomás Albadalejo (1998) and Lubomir Dolezel (1999), among others. From this new perspective, a possible world is conceptually reconstructed as a macrofictional structure that, based on pre-established true or false propositions, creates a world furnished – with characters, objects, states, actions – as a dynamic system of attribution and creation of valid meaning under the fulfillment of propositions by the enunciator and receiver. Umberto Eco defined this, in *Lector in fabula,* as follows:

> "We will define a possible world as a state of things expressed by a set of propositions (…) As such, a world consists of a set of individuals with given properties. Since some of these properties or predicates are actions, a possible world can also be interpreted as a development of events. As this development of events is not effective, but precisely possible, it must depend on the propositional attitudes of someone who affirms, believes, dreams, wishes, anticipates, etc. (…) " (1999, pp. 181)

From this concept of worlds, and starting from the textual linguistics of Petöfi (1979), Albadalejo proposes three types of models of worlds or "structures of referential sets" (1998, pp. 58-59). Type I refers to those worlds constructed based on objective reality, i.e. our world. The rules of the objective and effective world are adopted, thus producing historical or journalistic types of texts. Type II is related to the realistic fictional text, i.e. to the world that contains semantic elements that do not belong to the world of type I, but if realistic, could exist – and thus, its constitutive rules are similar to those of type I. Finally, type III groups non-realistic fictional worlds, those which do not exist in type I nor have similar rules, corresponding to fantasy or science fiction texts. The juxtaposition of semantic elements practically never configures pure worlds, and thus Albadalejo exposes the Law of Maximum Semantics, by which

> "The world model according to which a text is constructed corresponds to the maximum semantic level reached by any of the semantic elements of the structure of its referential set, meaning that in ascending order the semantic elements are type I's world model, type II's world model and type III's world model." (p. 62)

In this sense, the Law of Maximum Semantics always assigns a higher category to the entire referential set, regardless of whether there are semantic elements of lower categories. For example, the novel *Fortunata y Jacinta* by Benito Pérez Galdós (1887) proposes a type II fictional world – realistic fiction – since although it has type I elements, for example the city of Madrid, by the Law of Maximum Semantics, its designation is made all together as type II (pp. 62-63).

Albadalejo's typology, while useful for outlining possible worlds according to their composition, tells us little about the relationship between such structures and the rest of the actors in the pragmatic-semantic framework. In other words, it addresses the composition of the world from it design and assumes some premises – such as objective reality – that may be questionable. In this sense, Ryan, strongly influenced by Lewisian Possibilism,

uses possible worlds as a methodological system for investigating what it means, in semantic and logical terms, to be transported to the virtual reality of a textual world (2015, p. 74). Thus, she has proposed a model of relationships between the possible world and the real world – Figure 2 – which is not supported, unlike Albadalejo, by an objective reality but rather multiple interpretations – actual worlds – that each one makes of that reality – represented graphically by circles with thick borders – and that tend to overlap. Non-actual possible worlds – circles with thin borders – are those which we believe could be possible: their distance and relation to actual worlds depends on their so-called "accessibility relationships." As a literary example, Ryan establishes a closer proximity of the realistic novel to our actual worlds than, for example, fairy tales (2015, p. 72). A final option, not represented in the graphic, would be non-possible worlds: the accessibility relationships of the actual worlds do not allow access to them.

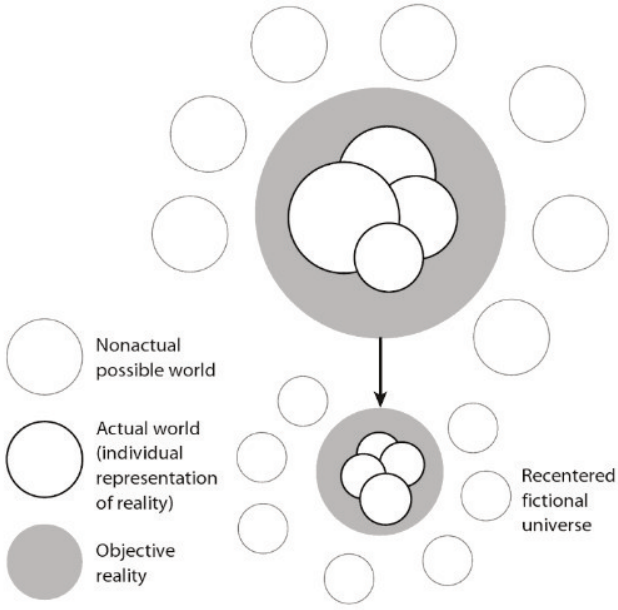


Figure 2. A recenterable possible-worlds system. Source: Ryan, 2015, p.73

Access from our reality to a fictional universe implies a "recentering" of it. Thus, entering a fictional novel or a movie involves transporting ourselves to an objective reality created for the work in which different possible worlds are organized and which remain separate from the objective reality we experience. Thus, and returning to Tolkien's world, objective reality establishes, for example, that orcs or hobbits exist and, unless proven otherwise, they do not in our world. In the same way, Eco (1999) supports this position of recentering by considering the real as an encyclopedia and possible worlds as cultural constructions. The example of *Little Red Riding Hood* is very illustrative: the story establishes a determined set of events, characters and its own world properties. However, when the text refers to Little Red Riding Hood as a girl, it does not express all her characteristics (female sex, two legs) but rather delegates this knowledge by using the reader's encyclopedia, i.e. it seeks interpretative cooperation between an intensional fictional reality and an encyclopedic knowledge that acts through extension. The exception occurs when the cultural construction must correct the encyclopedic knowledge to adjust the possible world: the story needs to establish that the wolf can talk – intension – otherwise the reader's real knowledge will deny it – extension.

Therefore, "In a fictional universe, objective reality corresponds to fictional truths, and fictional truths are unassailable, whereas the facts of actually actual world can always be questioned" (Ryan, 2015, pp. 73-74). On the other hand, what happens in non-fiction texts? In this case, recentering is not necessary since the reader is already located in the world of reference. While the fictional text needs to produce its own reality in which characters and properties reside, the non-fiction text only needs to resort to the native reality of the recipient (p. 132).

In accordance with Eco and Ryan's definitions, Dolezel has proposed a set of characteristics that define fictional worlds from a semantics perspective of possible worlds [5] (1999, pp. 35-47):

1.- *Fictional worlds are sets of possible states without real existence*

Worlds and their fictional traits have a specific ontological state, possible and non-existent. In this way, characters like Hamlet inhabit alternative worlds to the possible, without needing to respond to the ontological requirements of our existence.

It is important to note that this postulate configures the semantics of possible worlds from the autonomy of Lewis' counterpart and against the essentialism of Analytical Philosophy and referentialist demands. That is to say, the Napoleon in *War and Peace* (Tolstoy, 1865-1869, Spanish edition 1983) is a counterpart to the historical Napoleon, in the same way that the cinematic Caesar is not identical to the real one. Between the fictional entity and the real entity – or prototype – the so-called inter-world identity is established (Kripke, 1963): a set of relations based on characteristic properties that lets us see textual Napoleon and Caesar as similar to the real entities. Thus, the construction of certain attributes for the French emperor lets us consider a counterpart of him regardless of the medium or the authorial perspective that determines its intension: we understand inter-world identity whether in literature, film or television, or in the work of Tolstoy, Stendhal (1817, Spanish edition 2006) or the French television series (Decoin and Gallo, 2002). In each one of these worlds, the emperor is given a set of attributes that lets us call him Napoleon and, at the same time, assume that his non-existence is not a problem.

Along with the concept of Lewisian counterpart, Dolezel affirms that real non-existence is homogenous and also that fictional worlds do not have to be subject to the dictatorship of pure reference. In the first case, while every component of the fictional world is non-existent, every component is homogenous: as we previously asserted, Gandalf is as fictional

5. The following characteristics are not literal translations of Dolezel's text but rather constitute an updated and extracted adaptation of the exclusively literary context. Thus, common points have been grouped together and those unique traits of literature have not been incorporated.

as Julius Caesar. On the other hand, the creator of fictions is not subject to essentialist doctrine: it possible to construct a postmodern and festive Maria Antonietta with Converse shoes (Coppola, 2006) in the same way that Doctor Watson can become, through BBC's work, an ex-combatant of the Iraq War who writes a blog about his friend Sherlock Holmes (Gatiss and Mofatt, 2010-?). In other words, fiction does not follow the premises of philosophical models – in fact, here it differs significantly from theories of referentiality – but rather it is sufficient to ensure the inter-world identity, whether in relation to the historical Maria Antonietta, or another fictional world such as the one proposed by Conan Doyle, to be constructed with guarantees. Fiction does not define reality nor pay tribute to it, but it departs from it to model something completely different.

2.- *The set of fictional worlds is unlimited, very diverse and may have a heterogeneous macrostructure*

As we saw when addressing lines of philosophical thought, possible worlds are limited by the principle of non-contradiction – it is not possible to have P and –P at the same time. In other words, these worlds are limited by a logical rule that makes complete sense in an existentialist framework. The great question that Dolezel poses is if it is possible to limit existence and variety of fictional worlds.

If we start from the essentialist position and the ontological homogeneity of fictional worlds seen in the previous point, it is possible to affirm that fictional worlds are, by definition, unlimited. "The possible is broader than the real," recognized Russell (1937, p.66) upon realizing that imagination cannot be limited.

We must keep in mind that the contradiction of a fictional world must be analyzed intrinsically and not from referentiality except, logically, when the fictional world undermines the inter-world identity by distorting it. A world may be contradictory from our reality, but it is coherent. Therefore, the problem consists

not in the coherence of our world but rather the fictional world itself. And this is especially relevant for fantastical worlds, in which the referential contradiction is evident – orcs exist, which is contradictory to our reality – but it is not incoherent. Thus, every world defines its contradiction according to its own norms, which differ from one world to another. Dolezel thus defines the fictional world as "a small possible world, shaped by concrete global limitations, which contains a finite number of individuals who are composable" (p.42).

As we have previously seen with Leibniz, the *composable* is defined as the set of the possible and, at the same time, compatible. A historic novel will define its composability from a specific inter-world relation: the warlike conflict of the second Roman triumvirate makes characters *composable* such as Octavio Augustus or Marc Anthony, but not a priori, such as General Patton. In the same way, fictional laws that govern the world of *Star Wars* allow coherent fantastical *composability* that is contrary to referential logic – ewoks, lightsabers or the power of the Force – but still is determinate: it is not possible, for example, to breathe in space without an oxygen suit.

Therefore, fictional worlds are defined in a *composable* framework, but their conception as such becomes unlimited and diverse – natural or realistic worlds, fantasy worlds. Additionally, we could add here the open nature of fiction that we saw in the previous paragraph, and which assumes a specific interpretation of this idea. Thus, we can understand the unlimited as "multiple and inexhaustible conceivable fictional worlds" or as the world that never ends and, thus, makes possible its eternal and inexhaustible expansion, generally through collective participation and notwithstanding the authorial approval.

Finally, it is necessary to address the matter of impossible worlds, those which completely pervert their internal logic and the *principle of composability*. These types of structures appear when no one is capable of authenticating the truth of the *composable*

– as in the case of the postmodern novel – or when different contradictory possibilities are posed among which none have dominance. The previously mentioned modular narrative is a good example of this. In these cases, the space-time disassembling of the story may consist of a fictional world of multiple juxtaposed realities that are not *composable* with each other.

An example of this is the movie *Run Lola Run* (Tykwer, 1998) in which the protagonist lives the same experience three times: helping her boyfriend Manni get 100,000 DEM in twenty minutes and prevent his death. Each one of these iterations is composed by different actions, states and finally, conclusions: in the first, Manni dies, in the second Lola dies, and in the third the matter is resolved favorably. Regardless of whether the viewer decides to take the third option as the authentic one – for the cinematographic happy end – the truth is that the three stories configure an incoherent fictional world: it is not composable that Lola is alive and dead at the same time, or that her father lends her or does not lend her the necessary money to save Manni.

Another interesting example is the film *Mr. Nobody* (Van Dormael, 2010) in which a future grandfather tells a journalist different lives, chaotically and incoherently, depending on a key turning point: the divorce of the protagonist's parents and the child's choice of the father or mother. From here, the fictional world becomes a catalog of possible experiences, some more fortunate than others, which show different romantic relationships and concepts of happiness.

Although from the basis of *composability* all fictional worlds should be coherent, postmodernity and contemporary textual practices are demonstrating that we can coexist with worlds that surpass the unique and authenticated story. Therefore, it is possible to conceive that current fiction may even surpass its internal incoherence in favor of a unique creative expression that does not demand, from the author or the receiver, the constant

work of authentication of the fictional world's comprehensive rules.

3.- *Fictional worlds are accessed by semiotic channels*

The modal logic created by Kripke considers that accessibility relations allow the movement between one possible world to another provided that certain conditions are met. Thus, if Peter passes the entrance exam he may attend university, while if he fails, he does not complete the accessibility relation between the actual world – Peter is studying at the institute – and the possible world – Peter is studying at the university.

The conceptual transfer of accessibility relations to the realm of fiction may not be limited to a literal and formal borrowing, thus ignoring that here the real user accesses an imaginary world – as Eco seems to do (1979, p.231). The access of a fictional world is not comparable to the transfer of the actual world to a possible one from reality since this would be equivalent to comparing, rather grotesquely, both worlds at an ontological level.

The only bridge between our world and the fictional one is constructed through a semiotic system, whether literal or audiovisual, precisely because of the creative-interpretative dynamic involved in the mimetic process of creating a fictional world. As we already saw in Figure 2, the author preconfigures content in a pragmatic-semantic framework, in the same way that the receiver will use his/her specific framework to access this content and interpret it (Iser, 1987, p.65). These connections imply, firstly, that fictional worlds are autonomous but not independent of the reality in which they are nourished (Moser, 1984; Wolterstoff, 1980): all textual intension is related to extension, starting with a few cultural frameworks at the beginning, and is reinterpreted in the receiver's mind through the same or other cultural frameworks. Secondly, the physical and real inaccessibility between our world and fiction also implies that the semiotic transfer forces a transformation of

content, an intensional shaping that is explained, as we just saw, through the concept of Lewis' counterpart.

Finally, we should add an interesting reflection regarding inter-world relations. As previously mentioned when addressing the transmedia issue, the participation of different subjects may broaden fiction content through different semiotic channels: the world of Harry Potter is not limited by the aggregation of stories published in the books, but rather is enriched by content inserted in video games, comics and other mediums. However, we have also previously asserted that the idea of fiction does not necessarily imply the use of narratives and, therefore, the concept of transmedia narration seems hardly operational from the lens of fictional semantics of possible worlds.

For example, we shall return to the case of the popular saga, *Matrix*. Jenkins notes that video games and short films have broadened this science fiction world by filling gaps and enriching its context through different stories on different platforms (2006b, p. 99-135). However, does a story or narration exist when a fan adapts the main theme of the movie on his guitar? Or if he draws an invented character with the characteristics of a Matrix agent? Users participate in the expansion of fictional worlds in many different ways and not all of them necessarily pass through the narrative channel. In reality, narrative is a possible way of expanding a fictional world with the support of different mediums: it is the fictional world that actually takes on transmedia characteristics.

Thus, from the perspective of fictional semantics, it would be more appropriate to consider that fictional worlds are also sources of inspiration inserted into the real world and that they may circulate and expand from a transmedia logic. In other words, the real is not exclusively configured by different types of fictional worlds, but rather the cultural heritage and collective imaginary – composed of different types of fiction – also influence the configuration of subsequent fictional worlds: it is likely that the textual intension of hobbits in Peter Jackson's

movie trilogy marks a preconfiguration of future fictional frameworks in which hobbits appear, in the same way that constructing action scenes in contemporary film is not based on a real vision of violence, as much as the aesthetics and movements of the *Matrix*.

4.- *Fictional worlds are incomplete*

Another key distinction between modal logic and fictional semantics lies in the complete nature of possible worlds from reality, and the incomplete nature of fiction. Analytic Philosophy, a lover of empiricism and mathematics as descriptors of human thought, refers to the possible as a closed and complete, or determined, model, as we saw with Kripke's structure.

On the other hand, a fictional world may not be absolutely complete for a very simple reason: it never manages to describe all the properties, there are always gaps that can neither affirm nor deny anything. Dolezel – taking the example of Heintz (1979, p.94) – considers that it is possible to decide whether Emma Bovary died from suicide or natural death, but not if she had a birthmark on her left shoulder or not. Moreover, it is completely irrelevant. Where fiction is silent, a gap is produced that is not subject to truth propositions, but rather shows the incomplete and ethereal nature of the imaginary.

All these characteristics configure the fictional semantics of possible worlds as fertile grounds and with great academic and scientific potential. From this perspective, fictional worlds must be claimed as true and substantial cultural objects that transform contemporary society daily. Therefore, it is useless to maintain the historical mistrust that fiction has suffered for centuries, as well as the indifference of schools of thought more interested in textual constructs than the semantic space of meaning. And even less so when the Internet and new technology has made possible the transmedia circulation of individual and collective imaginations.

Therefore, and once the main characteristics of fictional worlds are established in the more traditional semiotic channels, in the following section we shall define to what extent all these fictional properties are maintained within the scope of video games. As we shall see, gameplay, together with interactivity and the conflict between classic Narratology and new-born Ludology will mark the translation of classic fictional worlds to video game worlds themselves and, with it, the creation of a new Theory of Ludofictional Worlds.

PART II

FROM FICTIONAL WORLDS TO PLAYABLE SPACES

Chapter 3

CAN VIDEO GAMES TELL STORIES?

> "The right man in the wrong place can make all the difference in the world." — Half Life 2

Video games, just like other audiovisual mediums, have configured their fictional characteristics, uses and practices from changing social and cultural contexts. Specifically, after more than half a century of cinematic *showing* and engineered *playing*, the emergence of the video game in the mid-seventies demonstrated unique features – part showing, part playing – that are key to understanding how fiction is produced today in electronic entertainment. To do so, it is necessary to go back a little in time.

At the end of the 19th century and the beginning of the 20th, Western society received promises of a better world led by new technology with fascination and enthusiasm. One of their greatest representatives was cinematography; the moving image and fantasy of ending with death had a profound impact on society at the time (Burch, 2006, p.39). In its beginnings, cinematography was a mix of technical curiosity and visual spectacle. Even without movie theaters, it was common to find cinematography in traveling fairs and small shops where the most disadvantaged social classes – workers, minor artisans – enjoyed the dramatic images of exotic travels and different types of societal, comical and erotic scenes. In general, it was a set of

experiences intended for a public hungry for action and wanting the pleasure of showing or showiness (Gómez Tarín, 2003, p.3).

In this context of audiovisual technological fascination, the first automated and proto-interactive gaming machines emerged. These rudimentary devices were offshoots of the Industrial Revolution and opened a new chapter in the history of games as social objects. It must be kept in mind that games – the battles, the popular games – are historically linked to developing rituals that unite society[1] (Agamben, 2001, p.99), such as harvesting, religious celebrations, solstices or military victories. In this way, games as social events set ritual calendars.

However, games began to forget ritual, maintaining only its structure and configuring what Agamben calls "the country of playthings," a nation "where inhabitants are dedicated to celebrating rituals and manipulating sacred objects and words, whose meaning and purpose nevertheless has been forgotten" (p.100). This "country of playthings" was enhanced by mechanical technology, with the first gaming machines scattered throughout theme parks, bars, traveling groups – circuses, fairs – or even in the streets. This technology fostered a very simple and barely interactive play experience[2], so that after inserting change, a product was given in return, as these devices were the forbearers of the dispensing machines that can be found today in metro or train stations. With time, the interactive ability improved and mechanical gaming machines started to appear with great success such as *The Automated Skill Shooter* (1894) – the first shooting gaming machine with rifle included – *Le Cochon Electriser* (1898) – a mechanical pig that electrocuted the user

1. Curiously, recently anthropologists have named the Braining, a tribe in Papua New Guinea, as a "the dullest culture on earth" for their contempt of games and glorification of work. You can find a summary of this unusual perspective on games here: http://www.psychologytoday.com/blog/freedom-learn/201207/all-work-and-no-play-make-the-baining-the-dullest-culture-earth.
2. It should also be noted here the emergence of automata, animal or human figurines that do mechanical actions. For the timeline of automata to robots, animatronics, androids and cyborgs, see Cuadrado, 2004.

with the challenge to withstand it for a given length of time – *The Erie Digger* (1924) – the first crane that caught stuffed animals – the *Fortune Ball Gum Vendor* (1929) – a dispenser of entertainment gum related to Hollywood stars – the *Baffle Ball* (1930) – the forefather of the successful *Pinball* – or the super famous *Futbolín* (1937) of Spanish origin. In any case, the main idea was to fascinate the worker and give him a minimum sense of control – the obedience of the machine in contrast to the worker suppressed by technology – in context of the most common areas of leisure and transportation. In this way, game removed ritual and was moved to areas of transit and leisure located between the worker's home and the factories.

Both forms of fascination, the visual – showing – and the ludic – playing – established a brief but intense synergy with the Nickelodeon franchise, the first movie theaters and the Penny Arcades, the main gaming centers. The idea was that working classes enjoyed mechanical games while they waited for the next movie showing (Huhtamo, 2003, pp. 11-13). However, this business only lasted a few years because the arrival of the middle class as movie consumers separated these two models of leisure. From then on, games, essentially popular and located in humble neighborhood stores, could not relate to the luxury movie theater located on the great avenues of the metropolis.

In the early 70s, Western society discovered its technological fascination once more. Thus, enormous stores full of gaming machines emerged, where a user could, against payment, interact with them and play. Video games had been born. Arcades[3], coin-operated games located in recreation rooms, which experienced their golden age between 1972 and 1980, entailed an authentic revolution. These centers were designed with very flashy colors and drawings that served, together with the video game's own sounds, to draw the attention of possible players by transforming the gaming machine into a "show in a box" that resembled the

3. As is common practice in academic literature, we will not refer to arcades, gaming machines and arcade games interchangeably.

visuality of fair booths and the oral enticement of the owners of the mobile movie theaters of original cinema. Just as mobile cinema, video games attracted the urban working class to an adrenaline show based on both showing and playing as a model of attracting them. On the other hand, this type of audience did not have any qualms about overcoming the stigmatization of the arcades as centers of playful vice and perversion, a prejudice inherited from the Penny Arcades, due to their alleged connection with gambling and organized crime.

But the similarities between original cinema and the first video games are not limited to the audiovisual attraction of gaming, but rather its true potential lies in establishing a set of very important practices and uses. Thus, the technology of the first movie theater, especially the short film, contributed to the creation of a ludic relationship of repetition where viewers returned again and again to see amazing short audiovisual pieces. In this sense, the origin of video games consists of this same relation to the machine: through the interactivity of the user playing over and over by spending change on the simple, attractive and addictive gaming machines. This ludic-interactive relationship explains, for example, the introduction of the points system and the euphoria of players trying to surpass the record of the famous High Score, the concept of "lives" or the countdown as a limit to the play experience.

Without a doubt, this way of gaming has undergone many changes over time. Today, we have both a great variety of devices – home consoles, computers, phones and tablets – as well as genres and target audiences. The history of play experience for video games is, in addition, the history of the development of fiction in electronic entertainment: from these simple and brief experiences, we have moved to much more complex fictional models in which technology and different artistic forms work together to create rich and vast worlds.

Therefore, and in the evolutionary-cultural framework of videoludic showing and playing, we will present here a

theoretical-practical model for the analysis and approach of video games as fictional worlds. First, we will clarify terminological accuracy that will be necessary before Game Studies appears – specifically, references to the conflict between Ludology and Narratology. Second, we will propose an integrated model between the rules of the game (*ludus*), narration and fiction that we call the ludofictional world. Finally, this ludofictional world will be summarized in three aspects: a static macrostructure, a dynamic microstructure and the metaleptic relationship to the player.

3.1.- THE DEBATE BETWEEN LUDOLOGY AND NARRATOLOGY

The academic perspective of video games as fictional worlds was by no means the first scientific approach to this subject matter. In reality, the initial formative years of Game Studies were shaped within the context of a disciplinary debate on whether video games could tell stories. This confrontation took place between two groups of academics – the so-called ludologists – who saw Narratology as a threat to the establishment of a new discipline that made video games central objects of study and, on the other hand, the narratologists who considered video games yet another medium that participated in the ecological system of traditional narrative. This debate, which started the creation of Game Studies and demonstrated the terminological importance of the concept of narration, emerged from two key authors: Espen Aarserth and Janet Murray.

In the late 90s, Espen Aarseth published *Cybertext: Perspectives on Ergodic Literature* (1997), one of the most influential works for digital textuality. In it, the Nordic author proposes a special interpretation of games and video games as cybertexts, distancing them from the traditional concept of the hegemonic hypertext (Bolter, 1992; Landow, 1995). The cybertext is a perspective that is used for dynamic texts, i.e. those that have the ergodic character by which a chain of events is created, broadly speaking, through the nontrivial efforts of one or more users (Aarseth, 1997, p. 94). While within the hypertextual paradigm,

the role of the user is exploratory or selective in the presence of a predetermined structure, the cybertext gives the interactor the configurative ability that lets him produce new texts from an underlying system (pp. 58-65). In this way, on a web page – a hypertext – a user may select or explore different predetermined paths or alternatives, while in a video game – a cybertext – the player, from a fictional world and a system of predefined rules, may create different games, each one different from the next. In the same way that this work distinguishes between hypertext and cybertext, it also distances itself from the approach of video games as narrative objects. Thus, while the narrative has two levels – description and narration – the video game is elevated to the ergodic level and, to a lesser degree, the descriptive level (p. 95).

In the same year, Janet Murray published her famous *Hamlet on the Holodeck* (1997) by using the work of Brenda Laurel (1991) as a reference in which she analyzes the digital environment – mainly, software design – as a space, a medium of creating virtual theater works whose main basis consists of the Aristotelian structure. The author borrows the holodeck from the television series *Star Trek*, a device which can produce holonovels, i.e. narrative recreations rich in detail in which humans may get involved or interact. Therefore, Captain Kathryn Janeway becomes, in her free time aboard the ship, Lucy Davenport, the governess of a Victorian novel.

With this example, Murray highlights the narrative possibility of these new mediums, in conjunction with a new way of "reception" based on interaction. She contemplates four characteristic properties of the digital environment: the procedural and participative – essentially, its interactive formation – and on the other hand, the spatial and encyclopedic dimensions, thus producing immersive contexts. Thus, "future audiences will take it for granted that they will experience a procedural author's vision by acting within the immersive world

and by manipulating the materials the author has provided them rather than by only reading or viewing them" (1997, p. 276).

Regarding electronic games, she believes that her future is to foster narrative aspects, making the video game a medium in which it is possible to tell stories. What is more, she establishes that "a game is a kind of abstract storytelling that resembles the world of common experience but compresses it in order to heighten interest. Every game, electronic or otherwise, can be experienced as a symbolic drama" (p.142). To reach such a conclusion, she proposes different case studies, all of which focus on the "digitalization" of the traditional narrative: the Victorian novel, poetry, theater… Among them, she emphasizes the interpretation of the video game *Tetris*:

> "This game is a perfect enactment of the overtasked lives of Americans in the 1990s – of the constant bombardment of tasks that demand our attention and that we must somehow fit into our overcrowded schedules and clear off our desks in order to make room for the next onslaught." (p.144)

Murray's narratological enthusiasm regarding the potential of games as vehicles for stories contrasts with Aarseth's critical mistrust of the systematic and direct application of theories and methods of other mediums to video games. Thus, for the Nordic author, Narratology aims to colonize the video game by treating it as another medium to tell stories and ignoring its distinctive features – especially, interactivity. In this way, a homogenization is produced that is convenient for narrative scholars but incomplete and simplistic from the perspective of video games as play (2004, pp. 45-49).

This positioning of Aarseth against narratological colonialism of the new interactive medium inspired a group of theorists to continue investigating the main differences between video games and traditionally narrative mediums. On one hand, their work involved demonstrating the inadequacy of the traditional narratological approach for Game Studies and, on the other

hand, promoting a new discipline focused on the study of electronic entertainment in an autonomous and independent way. These researchers received the name ludologists and the new discipline, Ludology[4].

There is certain confusion regarding the terminological origin of Ludology. While some authors attribute its origin to Espen Aarseth (Jenkins, 2005), its popularity as a concept as related to the study of video games appears in the publication of the article *Ludology meets narratology similitudes and differences between (video)games and narrative* by Gonzalo Frasca (1999).

In the article by Frasca, Ludology is defined as "a discipline that studies game and play activities" (p. 2). For the author, it is necessary to focus research efforts on the distinctive features of the object of study and, especially on the rules of game.

Ludology starts from the concept of play and thus it is not strange that is main influences come from child development theories (Piaget, 1991) and social anthropology (Caillois, 1967; Vidart, 1995), the latter in close connection with social development and leisure. For ludologists, the concept of play takes on the form of *paidea* and, as a specific form of play, *ludus*. Play (*paidea)* is focused on the simple pleasure of playing, without there being a determined goal in advance – for example, playing "mom and dad." In contrast, in its *ludus* form, play develops an organized and structured activity through a system of rules and is focused on a specific goal, usually to win or lose, such as chess (Gonzalo Frasca, 1999, p. 3). Simulation video games such as *SimCity* (Maxis, 1989) or *The Sims* (Maxis, 2000) are good examples of *paidea*, since the play experience does not involve establishing a specific goal. The player enjoys urban or family management, and while there are no rules determining how to win, the game does have rules determining how to lose. In any

4. It is no coincidence that Espen Aarseth decided in an editorial within the first issue of the Ludology magazine, *Game Studies,* that year 2001 should be considered "Year 1" in video game research.

case, if the player decides to establish a goal himself, the play changes from *paidea* to *ludus*. In *paidea* play, the most relevant is the construction of the play environment, while in *ludus* game – for example, in graphic adventures – the rules of victory/defeat are emphasized, as well as the variety of play possibilities made available to the user (pp. 6-7).

In any case, play, whether *paidea* (play) or *ludus* (game), is a simulated system of rules halfway between representation and simulation (Frasca, 2003b). While representation is an age-old way of understanding and explaining the world through narrativization, simulation, more notably in the sciences, implies:

> "'to model a (source) system through a different system which maintains (for somebody) some of the behaviors of the original system." The key term here is "behavior." Simulation does not simply retain the—generally audiovisual—characteristics of the object but it also includes a model of its behaviors. This model reacts to certain stimuli (input data, pushing buttons, joystick movements), according to a set of conditions."

To illustrate the semiotic comparison of both concepts, Frasca proposes the example of a photograph of a plane. Thanks to it, the shape and colors of the plane can be known, but how it flies or crashes remains unseen. In other words, the photograph is limited to conveying signs. The same happens in the movies, in which the landing of a plane, within the narration, gives interpretative freedom to the viewer – it may be an ordinary or emergency landing, for example – but this cannot manipulate the way in which the device performs its function, nor avoid it, since it involves a fixed sequences of non-alterable events. Photography and film go against the flight simulator. In this sense, the behavior of the airplane can be modified through a set of actions established by the system. Thus, according to Frasca, video games are a concrete form of simulation, while narration operates in the field of representation. While a *narrauthor* designs his work so it always acts in the same way, the *simauthor* (the

creator of simulations) "teaches" the program a set of behaviors and predicts the outcome, but never can be completely sure of what will happen (p. 7). This difference in control leads the author to speak of the fallacy of interactive narration, which aims to give the player freedom and, at the same time, maintain narrative cohesion.

In a similar line of thought to Frasca, Jesper Juul shares the idea with ludologists that the narrative has become a quintessentially hegemonic system. Notwithstanding that "games and narratives can on some points be said to have similar traits" (2001, p. 3), Juul establishes three basic reasons why video games should be considered essentially non-narrative objects:

> "1) Games are not part of the narrative media ecology formed by movies, novels, and theatre.
>
> 2) Time in games works differently than in narratives.
>
> 3) The relation between the reader/viewer and the story world is different than the relation between the player and the game world." (2001, p. 1)

To explain the first matter, Juul emphasized that in the narratological approach, stories are transmitted from one medium to another. Citing Chatman, "this transposability of the story is the strongest reason for arguing that narratives are indeed structures independent of any medium" (1978, p.20, cited in Juul, 2001, p.3). In this way, the conjunction of mediums between which stories circulate, creates its own ecological system. Do video games take part in this collective? To answer this question, Juul makes a comparative analysis between the movie *Star Wars* (1977) and the video game Atari made with the same name in 1983. Unlike the film, the game excludes the majority of the story's characters and events and, doing so, is limited to the inclusion of non-interactive video scenes. In this sense, the Star Wars game is configured as accumulated action sequences from the movie, converted into the play experience. The video game does not show a story and, thus, it is futile

to speak of participation in an essentially narrative ecological system (pp. 5-6).

The second argument refers to the difference in the operation of time in video games and traditional narrative. Juul turns to theorists like Metz (1974) and Genette (1972) to introduce the issue by differentiating types of time. Genette distinguished between the time of a story, which is the chronological order of events that Juul calls *story time*, from the time of narration, which is the order of events as presented – in this case, *discourse time*. To this, a third time is added, also proposed by Genette: the time of the reader/viewer. With these three established times, he analyses how they work in *Doom II* (ID Software, 1994) and concludes that the game constructs story time in synchrony with narrative time and reader/viewer time: the story's time is the present. In other words, a temporal difference does not exist among the player's enjoyment, the game's story, and the narrative time, since the user plays and perceives context at the same time – for example, while he moves, he shoots his gun and kills enemies, thus modifying the narration (2001, p. 7).

The third and final argument that Juul employs is the difference between the reader/viewer-story relationship and the player-game world relationship. On one hand, the viewer-story relationship is generally based on a certain anthropomorphic identification. In contrast, in video games, it does not necessarily have to be that way. For example, in the case of *Missile Command* (Atari, 1980), the player directs missile batteries, while in *Tetris* (Pazhitnov, 1985), he must eliminate blocks falling from above by forming rows: the player does not identify with the missile batteries nor the multishaped blocks. In this way, while the viewer seeks an emotional kind of identity relationship in the movies, the player essentially seeks a personal challenge to test himself as a player.

Thus, games may be more abstract than movies without losing the potential of their relationship with the player (p. 9).

After reviewing approaches by Aarseth, Frasca and Juul, we can see how Ludology, a discipline that aimed to bring together all those related fields into Game Studies, seems to give priority to game structure and its rules above the narrative task. In some cases, such Markku Eskelinen (2004), the belligerence against Narratology and related fields is clear[5]:

> "Outside academic theory people are usually excellent at making distinctions between narrative, drama and games. If I throw a ball at you I don't expect you to drop it and wait until it starts telling stories. On the other hand, if and when games and especially computer games are studied and theorized they are almost without exception colonised from the fields of literary, theatre, drama and film studies." (p. 36)

In contrast, other authors either have evolved their approaches towards the postulates of theoretical conciliation – like Jesper Juul, from strictly ludological positions (2001) to the admission of narrative features (2005) – or they have nuanced the ontological characteristics of Ludology, like its founder, Gonzalo Frasca, did in 2003.

The debate between Ludology and the narratological approaches climaxed in the Digital Games Research Association (DIGRA) conference in 2002, where research posing diverse positions was presented: from ludological support (Schut, 2003) to narrative approaches (Brand, Knight and Majewski, 2003), including perspectives that sought points of convergence (Copier, 2003). In this context, Frasca tried to clarify some misunderstandings related to the approach he proposed, and denied the existence of a true conflict between Ludology and Narratology.

The first issue that must be explained is essentially terminological, since it refers to what must be understood by Narratology and Ludology. Narratology is not perceived, in the same terms inside and outside of the study of video games. Thus,

5. Also add the dispute with Henry Jenkins (2004) in which the American author believed that Eskelinen's approach is much more rigid than Frasca's or Aarserth's.

following Mateas' lead (2002), Frasca suggests differentiating between narrativists, i.e. researchers who use literary theory as the foundation for building a subsequent theory focused on the interactive medium, and narratologists, i.e. academics who work from narrative postulates regardless of the medium object of study. In respect to the concept of Ludology, Frasca specifies his scope of application by contrasting two popular definitions of the discipline:

> "GameResearch.com's dictionary of game studies terms offers two meanings. The first one states that ludology is "The study of games, particularly computer games". This definition follows the one I presented in 1999, which was later expanded at Ludology.org, my research blog. Game-Research's second definition is essentially different: "Ludology is most often defined as the study of game structure (or gameplay) as opposed to the study of games as narratives or games as a visual medium." Personally, I do not subscribe to this second meaning, which I find to be a simplification, as I will explain later." (2003, p. 2).

In this way, the Uruguayan author rejects a restrictive Ludology regarding the role of the narrative in video games and supports a more open and transversal concept that allows all academic perspectives proposed to analyze video games.

The second major issue posed is the difficulty of identifying members of both movements. Within Ludology, the consideration of ludologist has been attributed to Aarseth – who, incidentally, never used such a term in any of his works – and his closest followers – Eskelinen, Juul and Frasca himself. Only Aki Järvinen has explicitly identified himself as a ludologist. However, it has become very difficult, according to Frasca, to clearly determine who the narrativists are since they have never been specified. The sole exception may be Janet Murray, as cited by Jenkins (2004), but even she has never explicitly chosen either side, nor denied the potential of Ludology – especially if we keep in mind that she was Gonzalo Frasca's thesis advisor.

The third and final nuance questions both the conflict between Ludology and Narratology, as well as the existence of radical approaches in the core of the first. Frasca upholds that the new discipline never has rejected Narratology point-blank, even though it has considered it less suitable than Ludology for the study of video games. Also, it puts in context certain comments by Aarseth, Juul and Eskelinen denying a radical character and, in connection with the debates on the "colonialist efforts" of Narratology, argues for the need of these researchers to provide a certain space of independence with a new field of study (Frasca, 2003, pp. 3-6).

Recently, Marie-Laure Ryan (2006) has emphasized the paradoxical and convenient alliance between certain ludologists and classical narratologists in which a narrative based on the act of speech by the narrator is praised and thereby, the mimetic possibilities of film or drama are excluded. Ryan considers that, from this union, Ludology has built its attack on Narratology from three completely refutable arguments (pp. 184-191).

The first argument, structured in four main points, regards games and narratives as different things because they have different characteristics (pp. 185-187). First, it highlights the need of narrators and readers/viewers, non-existent figures on video games (Eskelinen, 2001, p.3). Ryan, a follower of Bordwell's work (1979, 1985 and 1985b), advocates for a narrative focused on a specific way of organizing signs that involves the mental construction of a story, without the need of intervention by a narrator. In addition, the author emphasizes the possibility that narrators exist in video games, as in the case of *EverQuest* (Sony Online Entertainment, 1999) in which after taking out a tiger, the phrase "you've killed a tiger" appears on the screen. The three remaining points are focused on the lack of anachronisms (flashbacks and flash-forwards) in the linear structure of the narrative and the impossibility of showing and influencing past events. In light of all these issues, pointed out by (2001) and Eskelinen (2001), Ryan defends the possibility of using

anachronisms – even though it is not very common in the interactive medium – as in the case of *Max Payne* (Remedy Entertainment, 2001), in which the game is framed within a great playable flashback. Likewise, he notes that the linearity of the traditional narrative does not differ greatly from the structuring of a video game into levels in which the playable events connect to one another to maintain the coherence of the play experience. Finally, he highlights the existence of narratives that do not adhere to a past – such as electoral promises, or biblical texts of Judgment Day – and the ability of both the cinematographic viewer and the video game player to mentally orient themselves in events of the past, while being aware that they are watching/playing in the present.

The second major critical argument of Ludology considers that video games are simulations, while narrative is based on representation (pp. 187-189). Just as previously mentioned with Gonzalo Frasca's approach, the variability of a dynamic system is incompatible with the mere narrative representation of an event. Ryan regards Frasca's model as meritorious, but only applicable to games that may be represented and not for abstract games since simulation requires, by definition, an external reference to simulate, which is non-existent in games like *Tetris*. Ryan understands that a simulator is not a narrative in itself, but rather a generative system of narratives. Therefore, if a video game is a simulator, each round enjoyed by the player configures a fixed sequence of events in a specific sense by building, in each case, a different narration, In any case, Ryan considers that if all previous criticisms could take place in video games, this does not deter thinking of the electronic game as a creator medium of stories, notwithstanding that it does so in a distinct way from traditional mediums.

Finally, the last and third argument of Ludology – in this case, attributed to Aarseth (2004b) – in a more philosophical vein, considers that games may be conceived as vital acts, while narratives depart completely from this parallelism (Ryan, 2006,

pp. 189-191). For Aarseth, in the game, the final outcomes are real and experienced personally by the player, whereas this does not happen in traditional narrative. In the same way, the game is constructed with the player's choice, whereas the story is completely predetermined and does not allow interactivity of any kind. Ryan, in contrast, considers that the "game of life" does not exist without victories or defeats according to our specific goals. The player does not behave in relation to the game, just as in the real world he does not assume the same risks – for example, dying or being attacked by somebody – because he is aware that it is a fictional world mediated by an avatar. The fictional character and lack of responsibility of the players configure the game closer to film and drama than life itself.

After the analysis and critique of the main ludological arguments, and in order to overcome the polarization of the debate, Ryan calls for the creation of a ludo-narrativism that allows us to study the relation between the fictional world of video games and the playable space (p. 203). In this way, the American author positions herself between the extreme narrativism of Murray (1997) and the more reactionary ludological postulates[6].

Since 2003, the conflict showed clear signs of winding down. Susana Pajares Tosca emphasized the senselessness of the debate and the unnecessary positioning of researchers regarding the conflict, which seemed to emerge in the majority of studies. Ultimately, the most important aspect was the great variety of theoretical approaches and methodologies that were being bred regarding the video game as an object of study, and not the affiliation to an "absurd sect" (cited in Frasca, 2003, pp. 5-6). Celia Pearce, sometimes defined as a narratologist, denied any interest in the polarization of the debate and even the core of the conflict: the most relevant aspect is not to ask if video games

6. While the following section is devoted to the intermediate positions and new trends facing the debate between Ludology and Narratology, it is deemed more appropriate to place Marie-Laure Ryan in this section to maintain the coherence of her criticisms towards Ludology and avoid theoretical fragmentation.

are narrative but rather in what way they are. In the following section, various intermediate positions (or those not directly implicated in the debate) will be presented, which have tried to address exactly how video games may express meaning or in what way game experiences are narrativized.

3.2.- INTERMEDIATE POSITIONS

In the context of the debate between ludologists and narratologists, new voices not explicitly aligned have emerged that propose intermediate solutions or explore new concepts: Andrew Darley, Henry Jenkins and, in the case of Spain, Óliver Pérez and Xavier Ruiz Collantes.

Andrew Darley analyses the video games *Quake* (ID Software, 1996), *Blade Runner* (Westwood Studios, 1997) and *Myst* and the interconnection between narration, interaction and image (2002, p. 235). For Darley, video games have narrative components but they are ancillary: "What is important is the actual practice of the game, which implies a certain type of 'kinesthetic acting' that becomes an end in itself" (p. 237). Although the players' acting opens up the possibility of creating their own narratives, Darley considers that the fragmentary and repetitive nature of the game – recovering saved games and the constant death and resurrection of the main character – together with the lack of psychological depth in the characters, always implies a notable narrative poverty. And so "the idea of the computer game is based on a set of very different expectations. At the core of these expectations is not idea of narration, but rather interaction" (p. 244). Thus, the physical interaction of the player, which Darley calls the *vicarious kinesthetic,* is the central element of all video games, notwithstanding that the narrative may appear as an accessary or auxiliary element.

Henry Jenkins, in contrast, analyzes a sample of video games with narrative potential – *Indiana Jones and the Last Crusade* (LucasFilm Games, 1989)*, Myst, The Sims* and *American McGee's Alice* (Rogue Entertainment, 2000) – and establishes five key

points for understanding the narrative role of video games, which may be synthesized as follows (synthesis from Jenkins, 2004, pp.119-120):

1. Non-narrative games are possible because not all games tell stories.
2. Some games do have narrative aspirations. In fact, to understand the aesthetics of game design or contemporary game culture, some understanding of how games relate to narrative and games is necessary.
3. The narrative potential of games need not imply a privileging of Narratology over all other possible analysis, nor limit its application in a prescriptive sense – notwithstanding that the most cited example is Janey Murray.
4. The experience of playing games can never be simply reduced to the experience of a story.
5. If some games tell stories, they are unlikely to tell them in the same ways that other media tell stories.

Jenkins' goal is to avoid considering video games as a medium for telling stories and rather place them in a space where narrative possibilities enter – though not necessarily. This is what the author calls *environmental storytelling*.

The clearest example of this spatial narration is the video game *The Sims*. *The Sims* is a type of social game, in which a player, using a character, decides what job he will have or what furniture he will decorate his house with, including the type of relationships he will build with other sims. There is no predetermined story created by a designer regarding what the player decides within these choices. A story is not being told. It is a wide interactive space governed by a set of rules, without beginning or end, which focuses on the user's narrative creation through the combination of different objects. This type of narrative constructed by the player with an open environment only subject to game rules is called *Emergent Narrative* (p.122).

Jenkins also suggests three other forms of narration. The first is referred to as *Evoked Narrative* (p. 123) and is based on the pre-existing relationship with a known world. *American McGee's Alice* (Rogue Entertainment, 2000), adaptation of the novel *Alice in Wonderland* by Lewis Carroll (1865) to a video game, does not have much plot relationship with the original book. However, before the start of the game, the player already knows the spaces or characters: Alice in *American McGee's* is the Alice of the book or the animated Disney movie (1951). Some narrative elements – in this case, the character of Alice herself – are "evoked" or presumed before the start of the game and configure a narrative typology characteristic of cinematographic adaptations to video games.

The second proposed form is called *Enacted Narrative* (p. 124). In this category, games prioritize exploration on a map and, through micronarrations ("narrative elements might enter games at a more localized level," p. 125), the story is developed. In these types of games, there is a general story, but it does not develop until, after exploration, specific stories are activated.

The third and final form that Jenkins proposes is *Embedded Narrative* (p. 126). Without an exact definition, the author makes the following observations:

> "A story is less a temporal structure than a body of information. […] Within an open-ended and exploratory narrative structure like a game, essential narrative information must be redundantly presented across a range of spaces and artifacts" (p. 126).

This type of narrative is focused on land exploration and the need to repeat narrative elements on various occasions, generally because the unpredictability of the player's acting. The author gives the example of the game *Myst*, which from a subjective point of view, the player must explore the objects in the environment. Unlike the *enacted narrative,* here there are no micronarrations that allow advancement, but rather objects that

provide knowledge of the environment through placement in a scene, waiting to be explored.

On the Spanish scene, the recent doctoral thesis of Óliver Pérez (2010) has been an important milestone. His main objective addresses the analysis of meaning in video games through the intersection between Semiotics, Ludology and Narratology (p. 1). For Pérez, the meaning of game as a discourse is based on the concept of text, while the videoludic language configures said meaning as a medium of expression. The central pillar of his thesis focuses on the conception of game as a text – or better said, cybertext – both from a ludic perspective and in configuration of a narrative universe and interactive declaration. The author distinguishes two different levels of discourse:

> "In video games, the evolving dimension of the text connects to the concept of gameplay or game dynamics, which essentially consists of one or a set of prototypical game experiences developed over time. In contrast, the systemic dimension of the game/video game connects to the colloquial concept of "game rules," and corresponds to a transcendent structure towards the repertoire of prototypical game experience, and which fulfills the functions of determining and producing individual game experiences" (p. 67).

From this distinction in which theoretical construction and the analysis of videoludic discourse is produced as a game – with the subject/player relationship vs. game environment – as a narrative universe – canonical narrative models, story and plot – and as an interactive declaration – declared features, the relationship between the implicit player vs. the character and the role of the model player from the performative level.

Finally, Ruiz Collantes (2008), far from the ludological-narrative debate, has recently proposed accepting video games as cultural objects that produce narrative experiences (p. 28). A narrative experience is "a cognitive, emotional and sensory experience that is the product of the fact that the individual experiencing it is seen immersed in an articulated structure of life expressed like narration" (p. 19). These appear as cultural constructions in our

daily lives through memories, dreams or imagination: the essential in the construction of a narrative experience is the narrativization of the experience, the structuring of the experience so it takes on meaning.

Under this conception and using Huizinga (2000) and Callois (1991) as references, Collantes establishes a categorization of video games as narrative experiences in function of their reference or not to another world: compact games and representation games (p. 22).

Compact games present an autonomous microcosm not linked to an exterior world, which is defined by their own narrative rules and strategies, such as soccer or chess. The construction of these games is based on their own internal production of rules to follow, rules that also are independent of the world outside the game: the properties of the rook in chess or the possibilities of a goalie catching the ball in his hands during a soccer match are inherent to the game and autonomous of the real world.

On the other hand, representation games construct their normative structure based on the rules of an external world, a world of reference that serves as inspiration for creating a simulated world. In this way, the formation of the simulated world responds to a mimetic respect, more or less strict, of the original elements: characters, behaviors, aesthetic… Nowadays, social video games like *The Sims* are built based on this referential world.

As we can see from these intermediate approaches, the field of Game Studies has progressively shifted from the Ludology-Narratology debate – in other words, the superiority of an analysis of game as a system of rules vs. the conception of a new medium as another narrative model – towards the idea of a playable world. Thus, video games configure physical spaces (Jenkins, 2004) that end up marking their own interactive, kinesthetic worlds (Darley, 2002), more or less referential and

whose play experience may indeed derive from narrative experiences (Collantes, 2008).

3.3.- THE APPROACH OF POSSIBLE WORLDS AS A METHODOLOGY

As we have just seen, the emergence of the video game as a multidisciplinary object of study has produced an important controversy among different knowledge areas. And, amid the academic conflict between Ludology and Narratology, the Possible Worlds Theory has been gaining a foothold as a valid methodology for analyzing fictional worlds of video games.

In this sense, there is a very brief but interesting scientific tradition that has aimed to move the philosophy and literary construct of possible worlds towards a digital and ludic framework for today's video games. Its main influence comes from the book by Marie-Laure Ryan, *Possible worlds, artificial intelligence and narrative theory* (1991), in which the author suggests a general framework of application of possible worlds in the electronic context generally, even if it does not focus specifically on video games. From this first approach, Julian Kucklich (2002, 2003) has proposed a reinterpretation of the electronic game from the semiotic perspectives of intratextuality, intertextuality and transtextuality, thus creating a typology of six possible worlds (2003, pp.103-107).

At first, the internal reference of the textual world manifests as an audiovisual sign – images, sounds, text – producing an intratextuality relationship aimed at the player's participation and, unlike literature, anchors the possible world as an explicit physical manifestation and not as the reader's open interpretation.

This audio display – the physical configuration of the possible world proposed by the player – produces intertextual semiosis, a contrast to the hypothesis the player makes between the represented world on screen and his specific knowledge of the actual world. When the user embraces the features of this game

world, the phase of transtextuality emerges and, with it, very important elements such as the acknowledgement of the game mechanics, the issue of genres and the physical-cognitive ability of the interface.

The phases proposed by Kucklich are the first approach towards understanding video games as possible worlds, even if a practical application of the proposed typology was never suggested. In contrast, in 2004, the Italian Massimo Maietti made a semiotic analysis in which he configured a few applicable categories using the transfer and adaptation of Umberto Eco's literary model (1993).

For Maietti, the possible videoludic worlds (*mondi possibili videoludici*) are different from cinematic or literary worlds due to their level of access by interactivity (2004, p.151). From this perspective, the video game is a world moldable by the user and given *n* possible worlds will alternate by altering properties of the subjects that populate them. These properties, adapting Eco's definitions (1993, p. 199 onwards), may be essential – for example, the identity of Lara Croft in all possible worlds of the saga *Tomb Raider* (Core Design, 1996-2008) – even incidental properties such as hair length or the heroine's clothes (Maietti, 2004, pp.140-141). In turn, these properties may determine part of the game world structure, its aesthetic properties – distinct from the previous ones by lack of direct participation in the game interaction – or, in the case of incidental properties, also some of its processes. For example, Maietti analyses a very peculiar specific fictional world: the pink rectangle in the game *Tetris* (Pázhitnov, 1984). For the author, some of the most notable properties of this piece are (pp.154-155):

1. Rectangle shape with one side measuring 1 and the other 4
2. Pink color
3. Movement to the left or right allowed
4. Rotation possible on its own axis by 90 degrees

5. Appearance alternates with other game pieces in a ratio of 1/7
6. Falls at a given speed
7. User may accelerate the speed of the fall.

Of all these cited properties, only A, B and F are essential by having a fixed value, while C, D and G are incidental to their mutable value. E, although in the same category, lacks interactive capacity and is limited to a simple statistical result. It lacks the establishment of its position as system properties, aesthetics or process – interactive. In this case, the properties A, B, E, and F are structural regarding the game world and also, property B is, at the same time, an aesthetic property. Finally, C, D and G are defined as interactive and thus belong to the dimension of game process. In this way, the possible videoludic world may be analyzed from some semiotic categories that prioritize the main incidental-essential property axis and the structure-aesthetics-process triad.

The two most recent works applying the Possible Worlds Theory are by Jan Van Looy (2005) and Rocco Mangieri (2011). For Van Looy, the debate between ludologists and narratologists is still poorly focused, since the issue is not whether video games are narratives, but rather to what extent they may share characteristics with them. Thus, the author prefers to derive game analysis from the field of fiction towards the "travel into textual space" (Ryan, 1991, p.5), and especially towards the concept of worlds. In this sense, the player of a video game passes through a process of virtual recentering by accepting access to a new possible world that, unlike traditional fiction, is distinct for each game (Van Looy, 2005, pp. 4-5). This virtual world is configured by different actors of the narrative communication model and, thus, Van Looy compares fiction to the act of narration. Following Aarseth (1997), he identifies three communicative entities that we can call *intrigue*, the *intrigant* or he who makes intrigue happen, and the *intriguee* or the receiver of intrigue. Intrigue makes up the video game's central plot or

discourse. i.e. the fictional approach that is proposed to the user, while the intriguant would be a non-narrative manager that could be compared to the implicit author of fiction. Thus, for example, the intriguant in the video game *Pac-Man* would be the entity limited to moving the ghosts that try to finish off the protagonist. On the other hand, the intriguee – the closest entity to the traditional reader – is not only the main objective of the intriguant but also is the essence of the fictional world itself, since, without him, there is no game. The manifestation of this communicative authority is variable and notably determines the experience of virtual recentering. Thus, in games like *Tetris*, distance is minimal, while in experiences like *Super Mario Bros* (Nintendo, 1984), the intriguant is established through the mediation of a dummy intriguee (Van Looy, 2005, pp.8-9).

Finally, Rocco Mangieri proposes an analysis of the contemporary virtual environment and, specifically, the ninja video game *Onimusha* (Capcom, 2001), using the Semantics of Possible Worlds by Lubomir Dolezel (1999). For the author, *Onimusha* poses a possible world organized by a multitude of labyrinths and populated by different characters, spaces and properties. From a Semantics of Fiction based on the Theory of Action (p. 89), a multipersonal world is established "characterized by the physical-spatial *journey* in which the hero-operator faces other subjects in fiction, necessarily having to establish *communicational pacts*" (Mangieri, 2011, p.4). The world of the medieval Japanese in *Onimusha* is based on a relationship between interaction and power by establishing the game's dynamic as a confrontation between the user and the other characters. These functional hierarchy relationships – the adjuvant and the opponent, according to Greimas' terminology (1987) – produce a network of fictional features that will fluidly determine the user's interactive possibilities. Thus, motivation, intention, possibility and necessity are configured as essential elements for understanding game worlds that "seem to be greatly founded on their communicative and symbolic efficacy in the

continuous and varied staging of *body kinesis* and the physical features of actions" (Mangieri, 2011, p.11).

As we can see in this scholarly journey, the application of the Possible Worlds Theory to video games has only just begun. Most authors (Kucklich, 2002 and 2003; Van Looy, 2005; Mangieri, 2011) propose different useful concepts and illustrate them by analyzing more or less different video games. However, none of them set forth a true integral theory that considers the phenomenon of video games from a theoretical-practical lens. It is worth noting that Maietti's work (2004) is the closest to doing so, though it is limited to the semiotic analysis of video games and does not touch on its semantic-pragmatic dimension.

Thus, an approach that considers the video game as a possible world of ludic fiction – a ludofictional world – must include at least three key aspects: the relationship between fiction and game rules, the structure of worlds and the interactive progression and finally, the question of the user. It is precisely in this academic context, in which the first defining traces of video game worlds begin to be outlined, where our approach is framed. Therefore, in the following section, we will develop a specific concept of possible fictional worlds in video games that, on one hand, fits into this group of intermediate stances and, on the other hand, allows us to analyze its own relations of mimesis, fiction and narration that we have seen previously.

CHAPTER 4

THE CONCEPT OF LUDOFICTIONAL WORLDS

> "A man has a choice. I chose the impossible. I built a city where the artist would not fear the censor, where the great would not be constrained by the small, where the scientist would not be bound by petty morality. I chose to build Rapture. But my city was betrayed by the weak. So I ask you my friend, if your life were the prize, would you kill the innocent? Would you sacrifice your humanity? We all make choices, but in the end, our choices make us."
> — Andrew Ryan (Bioshock)

4.1.- THE CREATION OF LUDOFICTIONAL WORLDS: GAMEPLAY AS GAME DESIGN AND PLAY

As we have seen by addressing the integration of mimesis, narration and fiction, the process of creating a fictional world – and, where applicable, its possible narratives – is established using three mimetic models and that correspond respectively to preconfiguration, configuration and reconfiguration of the fictional framework. Video games, as objects that are produced a given social, cultural and economic framework, undergo a similar process of creation, consolidation and consumption, though they contain a few notable features (Figure 3).

The preconfiguration phase (Mimesis I) in the fictional work responds to both the pragmatic framework of the creation and the extensional semantics within a specific cultural context. In

the case of video games, although these values operate in a similar way, the creation of the work is considered an act of design rather than an act of creation. Thus, it is common to speak of video game designers before creators, or the techniques of game design (Crawford, 1984; Salen and Zimermann, 2004; Schell, 2008). The concept of design brings us closer to the idea of planning, technical elements and preconfiguration in the strictest sense, and away from creation as a spontaneous and/or authorial act. Thus, it is important to note that the design of a video game from the concept of worlds, consists of devising the limits of the game – what remains left out and what remains within – as well as the main mechanisms of internal coherence and game activity.

The phase of reconfiguration (Mimesis III) considers the end user's gaming experience or play[1]. This perspective responds, in general, to the most common uses and practices among player communities – pragmatics and the role of highly modifiable extensional semantics – specifically with online gaming. Thus, it is typical to analyze these types of games – the most predominant being *World of Warcraft* (Blizzard, 2004-?) – to contrast the use of ideologies (Page, 2012), relationships in the creation of virtual identities (Williams, Kennedy and Moore, 2011) or gender issues (Taylor, 2003; Williams, Consalvo, Caplan and Yee, 2009). It is important to emphasize that play comprises of the cultural practices surrounding the use of the game and also those that through implementation disobey those practices expressly anticipated in the fictional world such as cheating or stealing private data from a player during an online game (Glas, 2007). Thus, while play comprises of all gaming experiences derived from its use, gameplay anticipates a more specific and inscribed element in the core of play that is defined as the game dynamics

1. Here we synethisize the approach of Pérez Latorre (2010, p.27) by combining *Game* and *Gameplay* into Mimesis II and *Play* and *Culture* into Mimesis III. This reduction is done to make the general scheme more operative and to not diffuse the central argument of this research. In the same way, these concepts of *Gameplay* and *Play* are in line with those already mentioned by Alfonso Cuadrado (2007, pp. 328-331).

that emerge from the relationship between game rules and the game world (Egenfeldt-Nielsen et al., 2008, p. 102). In other words, gameplay is, in reality, the gaming experience designed for the user's enjoyment, which guarantees that the fictional world will be stable and self-sufficient, while its immediately superior category – play – comprises of both cultural practices associated with the game and gameplay and the social strategies intended to subvert it or give a different use than initially planned in the preconfiguration of game design.

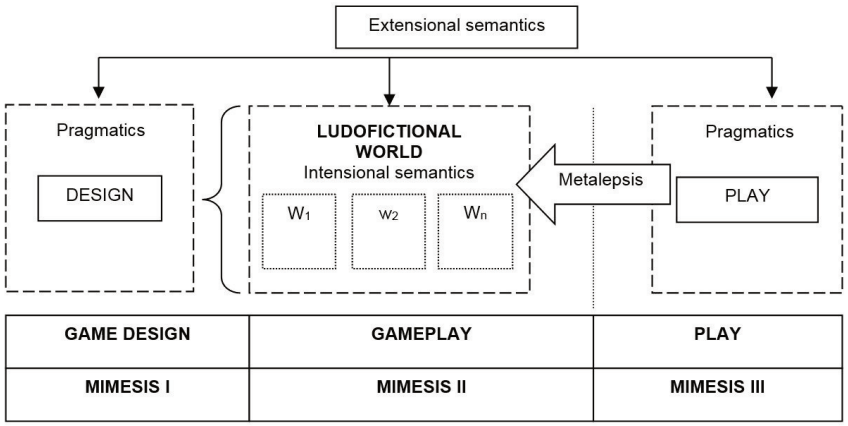


Figure 3. Semantic-pragmatic model of ludofictional worlds.

The dimension of gameplay can be easily associated with configuration (Mimesis II), since it forms an intrinsic part of the designed game world. This world, derived from game design techniques and potentially influenced by extensional semantics – for example, through intertextual elements such as transmedia fiction or genre game mechanics – is configured as a ludofictional world: a system of linked possible worlds that create a gaming space given by fictional content and closely related rules. This ludofictional world thus represents a large fictional framework that has different worlds with different functions. As we shall see later on, some of these worlds hold a hegemonic structural position – the main levels of the adventure, for example – in relation to other less relevant levels – hidden

levels, secondary missions – while some fulfill other functions, such as those aimed at narrative contributions.

Ludofictional worlds inherit the fictional worlds of literature and film regarding their fictional content, but they are completely different concerning their proactive and transformative ability regarding the user. Thus, these worlds are given their own intensional semantics that lets them have different types of characters, objects, spaces and temporality but that must necessarily be associated with the ludological influence of game rules. This relationship between *ludus* and fiction is established from the idea of a dynamic playable world and allows the transfer of one possible world to other without ever questioning the general structure of the system.

For this reason, and once the ludofictional world is defined, it is necessary to ask: what are the main characteristics of these worlds and how are they configured in such a way to reconcile a stable fictional context with a satisfactory gaming experience?

4.2.- FUNDAMENTAL CHARACTERISTICS OF LUDOFICTIONAL WORLDS

After a brief definition of ludofictional worlds in their implementation into the mimetic framework, it is now necessary to specify their most fundamental elements for all games, regardless of other factors such as genre, mechanics, fictional depth or ludic experience. After this explanation, we shall proceed to establishing an extended definition and the main levels of analysis for this semantic-pragmatic model.

Thus, the main characteristics of ludofictional worlds are the following:

1.- Ludofictional worlds are structured into systems of cohesive, stable and autonomous possible worlds

The anticipatory perspective ability in humans is the basic ability for understanding the game that all fiction contains within it.

Whether through the narrative or the fictional framework of a game, the future projection of actual events makes the reader/viewer/player part of the transformative potential of the fictional framework. Thus, much of the enjoyment of a good movie involves the mental anticipation of possible worlds, understood as distinct and composable states or situations. To this effect, the receiver locates a actual world – within the fictional one now being shown – and, from there, makes predictions according to the space-time situation and the essential elements of fiction categorized by Chatman as existent – fictional entities, objects and scenes – and events – actions, incidents and states (1990, p.19). In this way, the fictional game mostly comes from the anticipation of worlds through basic hints. Who is the murderer? Or, will the hero achieve his goal? These are essential dilemmas in any medium, which, after years of experimentation, have resulted in specific languages of fiction, as with genres or stereotypes.

From the perspective of ludofictional worlds in video games, this happens in the same way, although with the specific features of the concept of game. And here a static microstructural dimension of different possible worlds is established that has, in general, a structure of challenge-resolution-balance.

For example, in *Super Mario Bros,* the first playable possible world is called "Level 1" and configures its structure in the challenge of overcoming Level 1 without using up all lives or time, an activity of resolution consisting of eliminating or avoiding enemies, getting coins or discovering secondary hidden levels, and an ending or balance in a world based on the "amount of points, whether from remaining time and/or getting extra lives."

Each world structure is assigned one or several goals that provide the anticipated potential of the game, although the form of establishing each one of them may be completely different. For example, some games pose a set of possible worlds established by levels, with a unique game space and a potentially impossible goal: the eternal game against the machine. Here we find gaming

classics such as *Tetris* or *Space Invaders*, in which the sequence of levels never ends, while the speed of the enemies progressively increases. The purpose of these games is not defined from fictionality – and even less so from possible narratological interpretation – but rather the ludic concept of social play, even if later it also becomes transferred to the individual challenge. In contrast, and on the other extreme, approaches such as *Fable* (Lionhead Studios, 2004) or *Mass Effect* (Bioware, 2007) justify their anticipatory potential from the ethics of fictionality: What happens if I kill my travel companion to avoid a worse evil? What happens if I let him live and I assume the consequences of my actions? In ludofictional worlds, the gaming experience is always defined by various possibilities and some necessities that give cohesion to the entire system: there are several ways of reaching the main objectives of the apocalyptic-medieval world of *Dragon Age: Origins* (Bioware, 2009) but some of the stages are completely necessary, while in the traditional graphic adventures of LucasArts – for example *The Secret of Monkey Island* (1990) or *Sam & Max hit the road* (1993) – the margin of the possible is comparatively quite small.

The proactive ability of the user who accesses the ludofictional world leads him to set forth expansive strategies by always maintaining a fixed repertoire of predesigned possible worlds. Thus, the cohesion and stability that governs the structure of the system of the possible avoids the idea that the video game is a world of freedom for the user: there is no game world where everything is possible, since video games as fictional worlds are only able to mark, through game design, a simplified and synthesized plot that allows a limited repertoire of actions – the previously mentioned gameplay. Even "persistent world" games – ludic experiences designed in vast worlds accessible 24 hours a day – such as *World of Warcraft* or *Warhammer Online: Age of reckoning* (EA Mythic, 2008) cannot even show an infinite game space nor allow users to do any action whatsoever.

One of the most famous cases regarding the limits of ludofictional worlds was presented with the game *The Sims*. The academic Miguel Sicart put the player's freedom of action to the test in this social simulator, which he called the *Kurt Cobain refutation* (2003, pp.2-3). To do so, he downloaded images of Kurt Cobain and his wife, Courtney Love, and created their avatars in the game. He gave them a large house, lots of money and was limited to simulating – in a stereotypical way – the life of the singer Nirvana through constant fights with his wife and marathon sessions of alcohol, television and guitar solos. If the ludofictional world enabled complete freedom, Sicart could have played without issues, but that did not happen. Kurt began to be unhappy because in the world of *The Sims* happiness is measured according to the consumption of objects and the social relations one has. Thus, the singer of Nirvana – a standard of a certain anti-system logic – wanted a job, friends, to buy things and to get along with his wife. And thus, it was as if the system took control and rejected the user's requests for Cobain to continue his life of drugs and music: the ludofictional world had to guide the situation when the user had been questioning the limits of the game and the fiction.

As we have seen previously with Marie-Laure Ryan's system of worlds, all fiction is associated with a reality it derives from. In other words, fiction does not exist completely independently of the real world but also it cannot be reduced to a mere comparison of our reality, as Dolezel has emphasized by criticizing the simplification and annulment of fictional features within a poorly understood mimesis (1999, pp. 13-29). This bridge that links reality and fiction is configured, in our model, by both extensional and intensional semantics and by some shared pragmatic uses. Its main function is not only the cultural anchor for its reception, but above all its ability to fill in the gaps of fiction through the general knowledge of the world and the specific medium – language, genre clues, discursive structures, among others. Ryan calls this the principle of minimal departure (Marie-Laure Ryan, 1991, pp.48-60) and Eco alludes to it by

defending the concept of the encyclopedia as a cultural system of deposition that lets us face any text with interpretative guarantees (1993, p.38). The point of minimal departure or the encyclopedia operates in a similar way regarding ludofictional worlds. Here fiction remains potentially unlimited or incomplete – following what Dolezel previously established – but not the ludic configuration in game rules. Although the game as a fictional world may expand indefinitely, it cannot do so likewise in its interactive dimension. The possible worlds that configure the ludofictional system are limited and pre-established, consequently the structural principles and gameplay cannot be extended indefinitely. In contrast, the fictional framework in which they lie can be extended indefinitely, notwithstanding that it does not have any wider impact on the gaming experience. The following example may help explain this better.

In the video game *Max Payne,* Max is a police officer in New York who is living the American dream. He has a huge house, a beautiful wife and a newborn son who he loves like crazy. But a domestic robbery leaves his wife and son murdered, and Max pursued by the police in his obsession for bloody revenge. From this point, the game begins and the fictional world is designed between sobbing and drugs, night scenes and an eternal snowfall that devastates the run-down American city. The *film noir* style of *Max Payne* transcends its game levels and gives it very interesting fictional depth. While the player can only investigate certain buildings in the slums, different design resources let the user understand that the ludofictional potential is not limited to what can be played, but rather to the world that cannot be played but that gives meaning to his actions (Planells de la Maza, 2010). Through windows, we see a dark and snowy world, while different communication systems – telephone, radio, television – inform us of the progress of the police pursuing us. And although not all this information is useful in the sense of gameplay, it is useful for configuring the game as something more than a simple mechanism of mathematical decision: the night and the eternal snowfall contrast the moral decline of society with Max's

extreme measures and his contempt for justice, while the use of communication mediums gives rhythm and hopelessness to the revenge of the former New York police officer.

Regardless of the link between expansive fiction and its more immediate ludic experience, fictional elements have also been used to elegantly disguise the system limits. From the outset, the use of doors that cannot be opened, or the collapse of roofs – for example to prevent the user from returning to a previous level – have been very common, in the same way that sandbox games – open worlds where the user can move around freely – use geographical features such as high mountain ranges or rushing rivers to elegantly mark the game space and give fictional coherence to a boundary difficult to justify by other mediums[2].

2.- Ludofictional worlds are static models, designed to be authenticated by one or more players

The final aim of the fictional and ludic composition of ludofictional worlds is a user's active participation. The world is itself a static model until the player makes decisions and does so working with a system that we call the dynamic microstructural dimension: before a predesigned macrostructural system – the framework of possible worlds – the user must make decisions from the microstructure, each one of them unique to the game. This power of decision implies accepting a possible world and rejecting others – those that are in elective opposition to it – subsequently to assume the consequences and obtain a final balance of the game. This unique user ability we shall call here the *authentication function,* a term inherited from the Semantics of Possible Worlds from Dolezel. For the Czech theorist, "to exist fictionally means to exist as a possible constructed by semiotic means" (1999, p. 209) but the attribution of this existence is not tacit, but rather must be explicitly produced by an authorized

2. One of the most annoying displays of a world's limit is that established by so-called invisible walls (Juul, 2005, p.165). In this case, no fictional element justifies the closing of this path, but rather the fictional entity simply cannot continue circulating and runs into a wall that it cannot see.

authority. This idea is well understood with the following extract from *Don Quixote* (Cervantes, 1605) that Dolezel uses (p.213):

> "At this point they came in sight of thirty forty windmills that there are on plain, and as soon as Don Quixote saw them he said to his squire,
>
> 'Fortune is arranging matters for us better than we could have shaped our desires ourselves, for look there, friend Sancho Panza, where thirty or more monstrous giants present themselves, all of whom I mean to engage in battle and slay, and with whose spoils we shall begin to make our fortunes; for this is righteous warfare, and it is God's good service to sweep so evil a breed from off the face of the earth.'
>
> 'What giants?' said Sancho Panza.
>
> 'Those thou seest there,' answered his master, 'with the long arms, and some have them nearly two leagues long.'
>
> 'Look, your worship,' said Sancho; 'what we see there are not giants but windmills, and what seem to be their arms are the sails that turned by the wind make the millstone go.'"

In this fragment, two completely different possible fictional cases are proposed that are also contradictory: Are the enemies seen by Don Quixote giants or windmills? Who is right, the knight or his inseparable sidekick? They are, without a doubt, windmills. And that is because a hierarchy of authorized voices exist that, in this case, specify the relationship between a third person narrator and fictional elements. The narrator authenticates the existence of the windmills while assuming the position of the primary source of fictional facts, while Don Quixote's vision, as a fictional characteristic, has a subordinate position.

Unlike the frameworks for literary fiction, video games do not provide the user with a created authentication of fictional facts, since this power is exclusive to the game design, even in games where the user may combine elements to obtain new ones – *The Sims* or *LittleBigPlanet* (Media Molecule, 2008) are good examples

of this. But it is also true that the player is the only enabled authority to decide which path to take, which option of the possibilities must be authenticated and become the fictional fact of that round of the game. And it exactly this feature that suffers most in poorly designed ludofictional worlds: if the game does not give true options for authentication – i.e. an interesting repertoire of possible worlds – the player feels frustrated, while if a great variety of possible worlds exist, but they are poorly communicated or fictionalized, the player does not see the difference between one option and other, and becomes either overwhelmed or uninterested. Therefore, the authentication function implies at least two things. First, the user must understand his ability to act and the range of available possibilities and, second, a refocusing of a new possible world must be produced – passing from one level to another, fulfilling an goal and taking on the next one – together with an evaluation of the ludic and fictional performance of the previous possible world.

3.- Ludofictional worlds establish feedback and dependence mechanisms between their ludic and fictional dimensions

The debate between Ludology and Narratology includes, among other arguments, the dominance of game rules as a defining element of all video games. The most extreme position of ludologists regarding this precept was relaxed by searching for a model of consensus but that, in any case, would maintain the hegemonic ludic position above the fictional one. The clearest example of this appears with Jesper Juul's handling of the fictional worlds of video games. According to the Nordic ludologist, while games may independently function in their fictional frameworks, they are subject to the rules (2005, pp.121-122). To show this, he uses the game *Donkey Kong* (Nintendo, 1981) in which a very young Super Mario must save his girlfriend from an evil gorilla. The main issue of the game – from the fictional perspective – is that Mario has three lives. Why does Mario have three lives? Why does he recover a life

by reaching 10,000 points? Juul asks. The solution involves assuming that fictional worlds portrayed in a great number of video games are incoherent worlds, i.e. that "there are many events in the fictional world that we cannot explain without discussing the game rules" (p.130).

This positioning, therefore, implies that fiction breaks down and requires reparations from an interpretation of the perspective of game rules. However, Juul does not take into account that the presumption that Mario can only have one life is an essentially mimetic-reductionist viewpoint: in our reality, humans can only die once, which fiction is obliged to respect or break down, when in reality, its autonomous character and potential for intensional semantics refutes this. Likewise, this also occurs in traditional fiction. Some genre conventions, such as the spontaneous dance scene in musicals, do not build incoherent worlds, but rather worlds whose internal logic is expressed differently from the real world autonomously, as defended by Meinongianism or Modal Fictionalism. In other words, each fictional world is autonomously coherent regardless of the medium in which it is located and, in this construction of meaning, the world of reference may serve to fill in gaps but not to judge the relevance of that which is composed.

On the other hand, the positioning from Narratology poses more than a few problems in its application, at least if we consider this discipline from the traditional French and Russian schools of thought. One of these problems – which has not yet been explicitly studied – is the role that the traditional narrator figure may play. If video games are interactive stories, what position does an authority in charge of propelling this story have when this element is now in the hands of the player? From the perspective of ludofictional worlds, and by assuming a macrostructural compromise such as a fictional model, we avoid the inherent compromise of all narration with the actants of the communicative model, so we can do without the sterile debates on the supposed existence of an omnipresent narrator (Van Looy,

2005, p.7). However, the absence of an extradiegetic narrator does not deny the possibility of introducing categories of explicit intradiegetic narrators and game levels.

Therefore, for both the incoherent fiction of Ludology and the issue of the narrator in Narratology, the perspective of ludofictional worlds provides a solution with a complete and unbreakable integration between game rules and the fictional elements intended for the production of a space of unique meaning[3]. Thus, the ludofictional system provides internal coherence through the constant cooperation between game rules, fiction and extensional-intensional semantics, and in a very specific way, the pragmatics defined by the historic disposition of play. Consequently, designing a world with the beautiful archeologist Lara Croft involves the combination of intensional semantics – what her character is like aesthetically and formally – fictional construction – her personality and abilities – customs, for example, if Lara has a weapon, a rule will be enabled about how it will be used – and pragmatics – its relation with previous games, game modes and genre influences.

4.- Ludofictional worlds are metaleptically naturalized

As we have seen with the handling of traditional fictional worlds, the only possible access to these systems is through semiotic and distinct channels for each medium. Literature makes evocative use of words, film of sounds and images, and video games a combination of the previous two to integrate them with so-called interactivity. Thus, access to all ludofictional worlds necessarily passes through a semiotic channel that, throughout the years, has seen a marked evolution. On one hand, the game has expanded its fictional potential by providing new mediums of expression and aesthetics for displaying and communicating. On the other hand, physical controls – the tangible channels between the user

3. A similar and well defined model is proposed by Fernández Vara when analyzing games as simulations found at the intersection between fictional worlds and game rules (2009, pp.94-109).

and the system which guarantee the kinesthetic relation – have been adapted to new game mechanisms[4]. That being said, accessing a world does not imply *entering* it. The position of the reader, viewer and player is always located from the security of another world, thus that access is always *mediated* by a semiotic device: the camera and framing directs the cinematographic gaze at us while the positioning of platforms in video games paves the path forward.

The main concepts that have been used to understand the distinctive nature of video games regarding the access and transformation of their worlds has been those of interactivity, agency and immersion.

Interactivity is one of the most ambiguous and controversial concepts of the field of Game Studies and has been questioned by several authors Thus, the game designer Chris Crawford highlights a conversation between two humans as the best demonstration of interactivity, thus separating it from the new mediums (2003, p.262), while Manovich (2001, p.56) and Ryan (2001, pp.16-17) consider it a very ample element that also is associated with the task of the reader and the viewer in passive mediums. In this sense, interactivity seems very ineffective in equally defining very different phenomenon.

This absence of clarity would lead Janet Murray to propose the concept of agency in close relation with the idea of immersion – likewise derived from the previously cited suspension of disbelief. For Murray, agency is "the satisfying power to take meaningful action and see the results of our decisions and choices" (p.139) by invoking the sense that we are producing some kind of effect on the virtual environment. This active predisposition of the user has a direct effect on immersion, i.e. on the sense of transporting us to another world, since its origin

4. In this last case, the tension today between the appearance of very large ludofictional worlds and haptic controls that free the user from traditional controls is now relevant – think of *Kinect* (Microsoft) or *Wiimote* (Nintendo) – but does not manage to solve the freedom of movement for this type of space.

comes from a traditional passive suspension of disbelief – the enjoyment of a fictional context from reception – a model of active creation of the authenticity that "we focus our attention on [the fictional world] and we use our intelligence to reinforce rather than to question the reality of the experience"[5] (p.122).

From this concept of agency, we propose a new concept to define with greater precision the relationship between the player and the framework of the possible expected in a given ludofictional world: metalepsis.

In 1818, Pierre Fontanier determined that the rhetoric figure called metalepsis consists of "'transforming poets into heroes of the feats they celebrate [or in] representing them as if they themselves cause the effects they paint or sing,' when an author 'is represented or represents himself as somebody who produces himself that which, in the background, he only tells or describes'" (cited in Genette, 2004, p.11). Later, the narratologists Gerard Genette would be inspired by this definition to apply the rhetorical concept of narrative by defining metalepsis as "any intrusion by the extradiegetic narrator or narratee into the diegetic universe (or by the diegetic characters into a metadiegetic universe, etc.)" (1972, p.290). Thus, metalepsis happens when a narrator is introduced into the story being told, such as *La Ronde* (Max Ophüls, 1950), in which he must directly participate so the sexual relations of the protagonists come to fruition, or when a character of the story breaks into the upper level and takes control of it, as happens with the rewinding that one of the murderers manages in *Funny Games* (Michael Haneke, 1997). Thus it is a matter of breaking the logical limits, the fourth wall that is produced in all fiction.

But as previously established, ludofictional worlds are not narratives, but rather are located at an upper level: the fictional

5. Also, these properties may be easily associated with the previously seen concept of ergodic cybertext (Aarseth, 1997) - as we recall, an underlying system that enables the interactor to configure different texts.

framework. However, this does not deny that they can contain both stories and levels and different hierarchies of narrators. By virtue of the autonomy of the fictional object, these types of worlds mark a clear boundary with our real environment: diegesis – the gaming world – is separated from the extradiegetic space – the player's world – by limits that have been defined not without certain controversy (Consalvo, 2009) – as the magic circle (Salen and Zimmerman, 2003, p.96).

In this way, what is the application of metalepsis to video games? Essentially, the metaleptic dimension implies that the limits of fiction cannot be surpassed by the player except by a semiotic channel that permanently breaks in both senses – action and feedback – the limits between fiction and reality. While in the audiovisual, the viewer sees an evoked world through a window, in video games the user accesses this world and transforms it but, unlike the concept of agency, metalepsis implies three important nuances. First, it assumes that the rupture of the fictional framework happens in a limited way. In other words, while agency does not set limits of origin, metalepsis reinforces the idea that the user cannot do everything or modify everything, he can only act in a way that is anticipated and within the accepted scope of the creator. Second, metalepsis is not limited to actions – meaningful or not – but rather includes all kinds of processes: intervention in the world, the reception of this intervention, the unintended consequences and the game aesthetics and mechanics involved. And, finally, the narrative figure allows the analysis of the access to a ludofictional world from cultural exceptionality and, thus, from necessary learning. Therefore, learning to play for the first time means understanding the basic mechanisms of access and transformation in a world.

5.- Ludofictional worlds participate in an ecological model of transmedia

Of all the previous characteristics involved, ludofictional worlds receive from the "exterior" – extensional semantics, pragmatics and social uses – fictional elements and game mechanics that

later integrate into the "interior" – structure of worlds and intensional semantics, together with the additional and always necessary knowledge of the principle of minimal departure that is justified by the incomplete nature of all fictional worlds.

Of all the exterior influences that a video game may receive, one of the most determinant is provided by transmedia culture. As we previously saw, the transmedia property belongs to fiction and not exclusively to narration, thus ludofictional worlds can participate in this mediatic ecology without having to commit to a story. As seen with great games such as *Aladdin* (Capcom, 1993), *Goldeneye 007* (Rare, 1997), or *Lego Batman 2: DC Superheroes* (TT Games, 2012), approaches are more focused on creating playable and fun fictional frameworks than maintaining loyalty to the confined story.

The main intertextual relations between ludofictional worlds and other worlds are produced, in general, from three frameworks: realist vocation, fictional worlds of other mediums and worlds established by the medium.

Realist vocation shapes the game as an attempt to imitate a given reality. In this sense, the ludological term of simulation is the one best adapted to understanding that the ludic experience is aimed at trying to reproduce certain properties in a more or less realistic way. Thus, in recent years, we have seen the emergence of certain types of games that try to simulate a specific reality but also give a second objective that transcends the ludic one. We are talking about news games (Bogost, 2010), approaches aimed at informing the player from a journalistic perspective or *persuasive games* (Bogost, 2007), games with a mission to influence with an ideological discourse in the background[6]. Evidently, ludic simulation does not necessarily have to provide these additional

6. Other interesting approaches involve the ludic use of the realistic vocation, such as the macrocategory of serious games, games designed for childhood education, the training of qualified staff or medical treatments, or the recent term *gamification*, which refers to the conversion of certain tasks in games to get into certain habits. Even if *gamification* does not directly refer to video games, it does aim to apply its

perspectives. The genre of sport simulation, for example, sets forth a mimetic aesthetics in relation to the real world – the design of the players' faces, the equipment and the team logos – and aerial simulation imitates not just the construction of planes but also the laws of physics and complete flight controls.

However, it would be an error to believe that all realistic influences must necessarily require a "seriousness" in their mimetic reflection. Some of the best games in history have been based on real professional contexts but from a sarcastic lens, exploiting the use of intensional hyperbole. Thus, the cartoonish style of some humorous games such as *Theme Hospital* (Bullfrog Productions, 1997) exaggerate attributes without managing to modify the essence of the representation.

Compared to other mediums, fictional transfer has been very fruitful in several senses. Thanks to the establishment of a powerful star system of games – Mario Bros, Sonic, Lara Croft, Kratos, Link or Solid Snake, among others – a few long sagas with rich fictional worlds – *Mass Effect* (Bioware, 2008-2012) or *Resident Evil* (Capcom, 1996-2012) – video games have led to books, comics, board games and, of course, movies. And it is precisely within the cinematographic medium where the transmedia ideal seems to obviously fail with some works that completely distort the game's fictional framework. In this sense, it is interesting to see how the cinematic medium has issues not only producing a story from an essentially non-narrative medium but also respecting fictional characteristics and main action spaces. Thus, movies such as *Super Mario Bros* (Anabel Jankel and Rocky Morton, 1993), *Alone in the Dark* (Uwe Boll, 2005) or *Max Payne* (John Moore, 2008) distort the minimal concept of fictional transfer and inter-world identity. Furthermore, the reverse path – of other mediums to video games – have been disparately fortunate. In this way, fictional television series such as *Lost* (Jeffrey Lieber, J. J. Abrams and

mechanics to other professional environments, such as advertising and public relations.

Damon Lindelof, 2004-2010), *Prison Break* (Paul Scheuring, 2005-2009) or *Grey's Anatomy* (Shonda Rimes, 2005-?) have ludic counterparts that have not been adapted to the episodic nature of the original works (Azkarate, 2010), while games focused on certain movies and books have been able to translate these essential fictional components. In other words, and regardless of the production variables of all these works, it seems clear that the true transmedia potential of ludofictional worlds in relation to other worlds does not lie in a possible version of a story, but rather a true understanding of fictional characteristics and spaces in which events are carried out. The integration between rules and fiction that characterizes fictional worlds takes on special meaning when the extensional semantics comes from a non-playable medium – literature, film, television – and when establishing the repertory of intensional semantics of the game world, it must necessarily translate to an aesthetics, some possibilities and ludic necessities, and structural and specific restraints.

However, video games themselves are the main source for the creation of ludofictional worlds. In this case, we are not facing a strictly transmedia relationship – there is no medium change – but rather a fictional transfer from intertextuality logic, in such a way that two fictional worlds are placed in contact so one of them reveals certain ludofictional properties – characters, objects, spaces, game mechanics and rules – in the other. This type of relationship has followed different strategies such as, for example, the sequel, prequel, remake, reboot, spin off and cross over.

The sequel and prequel are the traditional mechanisms for the creation of sagas. It is impossible to determine the exact number of games related to the Super Mario universe, just as it is difficult to establish some type of temporal relationship between the numerous offerings of the Zelda saga: indeed, the concepts of sequel and prequel, etymologically linked to a concept of temporality, are not reliable for the study of video games worlds.

It is evident that some works precede the worlds shown in other games – see the strong fictional bond between *Max Payne* and its sequel, or the link between *The Secret of Monkey Island* and its second part – but generally game design is mainly focused on the transfer of certain fictional elements, especially characters and spaces, rather than plots or stories. This occurs for two reasons: first, because the commercial perspective of video games demands that anybody can play without having enjoyed the previous game and, second, because it is much easier to design starting from characters and their traits than from narrative dependence. In this way, video games increasingly praise the fictional figure of the character as the world's axis and try to consolidate it to guarantee its continuity as a franchise, either in its typical genre – Mario Bros on the gaming platform – or in other genres that allow easy fictional transfer but that would be seen with certain complications if chosen for narrative loyalty, as in the case, for example, of the racing game *Mario Kart Wii* (Nintendo, 2008) or the puzzle game *Dr. Mario* (Nintendo, 1991).

The remake and reboot are two distinct strategies but both start from an already consolidated fictional world. The remark can be understood in two ways: either it is the transfer of the same world from one gaming platform to another and thus receives the name port – from portability – or it is the update of a world already proposed some time ago, typically 5 to 10 years ago, which reappears for new platforms. In this second case, considering a remake in a strict sense, the system of the ludofictional world remains intact although it may have small variations in the visual and sound areas. As we can see, the concept of intertextuality here is minimal since the original world and the created world are practically the same. However, it becomes useful to establish this category for safeguarding the graphic and sound updates and their cultural connections, whether for the purposes of the ludic handling of nostalgia or other issues, such as the image of women or the manifestation of violence. Thus, the remake of *Resident Evil* for GameCube involved a profound change in the graphic section of the game,

while the new tribute version of *Maniac Mansion* (Lucasfilm Games, 1987) made by fans redesigned the entire game with the graphic style of *Day of the Tentacle* (LucasArts, 1993), the second part of the saga.

On the other hand, the reboot is different from the remake because it does not imply an update of a previous world but rather a restart of it. In other words, it breaks its commitment with all previous versions of the original world and limits itself to establishing a new canon, which generally respects the essence of the fictional characteristics. Such is the case with the new game of Lara Croft, the young archeologist who stars in the reboot of the saga *Tomb Raider* in *Tomb Raider* (Core Design, 2013). In this reboot, Lara arrives on an island after a shipwreck and, unlike previous games, the heroine is a young and inexpert girl who must face numerous dangers in her despair. Therefore, in this reboot the hero is stripped of her abilities and powers to show her origins, her period of learning and allow her training from the beginning.

The last two categories, very common in television and movies series, are spin off and cross over. The spin off implies the creation of a new game by using some fictional elements of another world as reference, generally the main character, though it may also involve a relevant secondary character or enemy. Such has occurred, for example, with *Luigi's Mansion* (Nintendo, 2001), the game starring the forever secondary character Mario's brother, Luigi, or the mini-games of *Rayman Raving Rabbids* (Ubisoft, 2006). In contrast, cross over involves bringing together fictional elements in the same world from different ludic proposals, a good example of this being *Mario & Sonic at the London 2012 Olympic Games* (Sega Sports, 2007), which reunites the main stars of Nintendo and Sega, or *Marvel vs Capcom: Clash of Super Heroes* (Capcom, 1999), a fighting game between the Marvel heroes and the fighters from the most popular Capcom sagas.

In the last years, we have seen the expansion in the ability of ludofictional worlds to be nourished by contributions. Even if they are predesigned by the creator, they give the user certain flexibility when configuring them. This involves the import of games from other games, which here on will be referred to as *inherited worlds.*

Inherited worlds set forth a fictional expansion beyond the foundation of the game, an experience that involves the user in a much closer way with his actions. The most relevant example of this type of strategy lies in the sagas made by Bioware, especially *Mass Effect*. The three titles that form this saga show a universe that, in year 2183, is governed by the City Council, a government formed by the three most powerful races: the Asari, Turians and Salarians. In this fictional context, the player's decision does not only influence different world events – betrayals, conspiracies, wars – but also the ethical shaping of Commander Shepard, the game's protagonist, and in relationships with the rest of the characters of the galaxy. But the most important aspect from the lens of inherited worlds is that the decisions taken by the user do not only have an effect on the present game, but also those to come. Thus, once the first title is finished, we can import the data of our game for the second game, and the same with the third one: the decisions taken in each one of them will be carried to the following one and determine the game experience.

Inherited worlds display their great potential when the ability of importing worlds is added to the ethical relevance of the decisions. It is not the same to transfer the color of the clothes or the objects that a character has from one game to another, as determining the extermination of an entire race or the assassination of one of our travel companions. In this sense, the saga *Mass Effect* forces the player to think of his actions from the determination of the real world before the triviality of the game, since all updates of the possible have definite consequences. Should I save my friend and condemn an entire race, or should I let him die and help millions of beings? It is only possible to make

a definite decision and with great implications for the following ludofictional worlds.

Until now we have seen different characteristics that define, in general, the potential of the concept of ludofictional worlds. In summary, the model may be divided into three categories of independent analysis that can account for different data according to the methodological approach that is sought. Thus:

1. From a formal and structuralism perspective, ludofictional worlds may be studied in their static macrostructural dimension, i.e. from the idea of the framework of possible worlds, and the relationship between a actual world, several possible worlds and necessary worlds. This approach lets us obtain models of worlds and may serve, for example, for the analysis of video game genres, the planning of gameplay and the theories of game design.
2. From an internal and evolutionary perspective, ludofictional worlds may be studied in their dynamic microstructural dimension, i.e. from the impulse of game action in relation to the integration of rules and fiction. This vision lets us analyze in detail the construction and role of characters in relation to action, the configuration of the game balances and the spatial-temporal point of view. Its study may help methodologies related to the representation of gender and violence, the psychology of fiction and the emotions or detailed design of gameplay.
3. From a kinesthetic and receptive perspective, ludofictional worlds may be studied regarding their metaleptic dimension. i.e. from the rupture of the fictional framework and the establishing of semiotic channels, whether intradiegetic or extradiegetic. This interpretation lets us analyze the relation between the user and fiction, the voluntary and involuntary breaks in the world limits, the role of parody from self-

awareness and the physical controls intended for the game. Its study, therefore, focuses on areas such as the history of game and the cultural definition of play, the study of game interfaces and the symbolic models of representation and, finally, the narrative theories related to fictional levels.

4.3.- THE STATIC MACROSTRUCTURAL DIMENSION OR SYSTEM OF WORLDS

4.3.1.- THE MODAL DESIGN OF THE STRUCTURE OF MEANING FOR LUDOFICTIONAL WORLDS: THE ARTICULATION OF THE ACTUAL, THE POSSIBLE AND THE NECESSARY

One of the main elements for all video games is the proposal of a challenge. This challenge is in itself a possible world that integrates game rules – how a challenge is solved – and a fictional framework, in what context this goal occurs. In some cases, the game consists of only one possible developing world, such as the previously presented example by Maietti in which different levels of *Tetris* show the same fiction but with some property modified, such as the speed of the pieces. In contrast, in other more contemporary and complex games, it is necessary to link different types of worlds, some central, other periphery, which are related in a specific way: either they are on the same level of hierarchy or they are codependent.

But, in any case, every system of worlds has minimal unity so that the game takes one meaning that we call the *minimal ludofictional world principle*. The minimal ludofictional world principle is composed of a possible playable world and a final objective, whether the latter is explicit or implicit. The possible playable world as a beginning responds, essentially, to the beginning of video games and the iteration of the first machines in the game experience: one single autarkic screen – it cannot go beyond the border – a homogenous lighting, a black background and simple rules provided the implacable core of every game. But an objective had to be added to this type of game, whether prescribed or implicit, which could be complemented from

outside the structure of meaning thanks to the game uses inscribed in play. In this way, although the arcades posed an objective of survival by facing waves of aliens or ghosts inscribed in the gameplay, it was also common to add a social objective based on exceeding the high score.

Therefore, each possible playable world is composed of at least the following *ludofictional elements*:

- Existents: Fictional entities, objects, spaces and other fictional elements. Also included here are the rules that determine the general behavior of each one of them.
- Events: Possible, impossible and necessary actions, events and states related to Existents among them, Existents and the environment and those involving the player in all them.
- Starting point: The initial state of the possible world, whether at the start of the game or through the inheritance of a previous possible world inscribed in the same ludofictional system.
- Explicit/implicit objective and main or secondary objective of this world.
- Ludofictional conflict.
- Mechanisms of game balance and enabling/prohibiting access to the following possible world.

Some elements of possible worlds overcome their specific structure to reach the system in general, thus configuring *foundational elements*. Some examples are the protagonist characters who are used to overcoming more than one possible world, or the final objectives of the game: Super Mario moves through all worlds and the objective to save the princess determines the entire ludofictional system, notwithstanding each specific objective of each one of the possible constituent worlds.

In any case, and regardless of the number of possible world inscribed in the system, the general structure is also regulated by two other principles: the *logical model principle* and the *principle of inter-world identity*, both inspired by the previously seen philosophical concepts.

The *logical model principle* refers to the stability characteristic of ludofictional worlds and likewise contemplates a set of subprinciples that are non-contradictory and have sufficient reason and limited composability. The non-contradictory and sufficient reason principles, which were set forth by Leibniz and later adapted to the analytical model, contemplate different things. The non-contradictory principle implies that something cannot be possible and impossible at the same time and something cannot be, simultaneously, neither possible nor impossible. In contrast, sufficient reason appeals to a starting motive for existence, i.e. everything exists for a reason.

The transfer of these sub-principles of the logical model of ludofictional worlds allows the formulation of some important properties for the system's coherence. Thus, and in relation to non-contradiction, the game may give or deny powers to the hero, but never simultaneously. Game design has tried to resolve this logical impossibility by establishing transitory states, such as cooldown, i.e. a time for recharging certain powers denied to the hero without giving up his possession of them. On the other hand, unlike non-contradiction, the subprinciple of sufficient reason does not refer to the existential clarity of ludofictional elements, but rather its systemic necessity: the worlds inserted into the structure have been expressly created by the designer to collaborate in the ludofictional world in some way. In other words, games do no provide completely random worlds without reason, but rather they are all previously designed, even those in which the player can configure spaces or characters. A good example of this determinism has been previously seen with the *Cobain refutation* and the limits of fictional worlds.

The subprinciple of limited composability refers to the existence and possible combination of different fictional elements. In other words, if the composable is understood as that which possibly exists and at the same time exists, then it is possible to understand that video games set forth different states within their world: that which possibly exists but does not exist, that which is possible and exists, that which is impossible and, therefore, does not exist. The idea of composability implies the playing of possible worlds and impossible worlds, thus bringing us closer to modal logic as a system for understanding the structure of worlds. In any case, this perspective has been implicitly outlined by ludology, specifically by Gonzalo Frasca – here noted by Óliver Pérez – and his typology of game rules[7]:

> "2. Manipulation rules. This level of game meaning refers to what the player is allowed to do and what he is not allowed to do according to the rules. In a game like *Grand Theft Auto 3* (Rockstar Games, 2001) he is allowed to shoot prostitutes and later steal their money, but as Frasca indicates 'Even if many people were disgusted by this possibility, it is essential to point out that this is not the goal of the game. Rhetorically, a game where you may kill sexworkers is very different from a game where you must kill them in order to win..'
>
> 3. Goal rules. Goal rules are what the player must do in order to advance, and/or the necessary conditions for winning. They are, in a way, a 'command' established by the game creator, which impresses an explicit moral component and gives meaning to the video game, along with other structural levels. The subsequent goal rules would be the challenges imposed by the game." (Frasca, 2003b, pp.232-233, cited in Pérez, 2006, pp. 53-54).

Frasca's two great typologies display to what extent the Possible World Theory is relevant to us. The modal logic that makes up

7. We shall disregard the first game rule proposed by Frasca, which he calls "representation rules" since we understand that it must be separated from the context of rules to occupy its own space of aesthetic and discursive structures. Likewise we shall disregard the "meta-rules" (editing of external rules that allow modification of the original rules) since they remain outside of the construction of the original game.

this theory adds to the propositional logic of the symbols (“it is necessary that”) and (“it is possible that”) to relate to, in our case, events, characters and properties. If we read Frasca’s rules carefully, we shall see how the manipulation rules are translated as “it is possible that”, while the goal rules may be expressed as “it is necessary that”.

The last great principle that determined the static macrostructural dimension is *inter-world identity*. In this case, a connection between different worlds must be produced, which configures each one of the characters, objects and spaces as a unique identity. This transferred identity allows not only the recognition of characters within the ludofictional world, but also is key for transmedia fiction and inherited worlds. In the same way, inter-world identity does not involve a fixed and static element, but rather a dynamic property that is updated by participating in each one of the worlds: points are accumulated by winning games, the hero gets weapons and powers and future scenes may be effected by current decisions. However, identity should not be confused with accessibility. The worlds become accessible to the player if certain conditions are met, while identity – at least in its most primitive aspect – does not require access to given worlds.

From all these principles, the ludofictional world is configured as a framework of different possible worlds that remain static, waiting for the intervention of the player, and only when this intervention produces the transfer and the evolution of different game goals. In other words, the world pre-exists the game, and the user continues overcoming goals, advancing and discarding different worlds, while leaving behind surpassed or failed goals. This brief definition of the system implies two important conclusions. First, all possible worlds exist insofar as all have been planned, to a greater or lesser extent, by the designer and, second, the changing position of the character – through the control of the user – establishes relative actual worlds. Therefore, the existence of the possible world and the relativity

of the actual world necessarily leads us to a philosophical theory that we have seen previously: the possibilist theory of David Lewis.

Recalling what Lewis established: *all that is exists, but not that all that exists is actual.* The actual world is that in which we find ourselves now, which is relative to our position and has the name *indexical term*. Additionally, along within all the existent possible worlds are their characters and scenes that make up the *counterparts* of a referential world. So, how does all this work at the static macrostructural dimension of ludofictional worlds?
Ludofictional worlds may be subject to Lewis' fictional operator, thanks to which truth propositions are established. Thus, for example, the phrase "Sonic, a very fast blue hedgehog, must collect rings and save animals in danger," may be subject to a proposition of the ludofictional world, thus avoiding Juul's idea of incoherent worlds or the extreme referentialism of platonic mimesis. But in addition, regarding these pre-existing worlds, the role of the player as a driver of action places the character within the diegesis in a position of relative actualism: surpassing level 1, the character enters level 2 and has the expectation of reaching level 3, but in any case, according to the indexical term, the "past" world is level 1, the actual world is level 2 and the "possible" world – relative according to the conditions of winning level 2 – is level 3. Evidently, this lineal structure is an example since nothing prevents access to different worlds simultaneously – for example, taking on a main mission and several secondary ones – but in any case, there is always a actual position for the protagonist in each one of those worlds.

The last interesting idea of Lewisian theory for ludofictional worlds is that of counterpart, since it has an impact on the transmedia character of fiction. Thus, movies based on games and vice versa configure counterparts for the fictional elements of the original world. Thus, the properties of a character in the transmedia transfer do not have to completely conform to the original world, as it is enough that they retain their inter-world

identity, just as this transfer occurs between literature and film or television.

On the basis of Lewis' approach and the interpretation from video games, we propose here a macrostructural analysis of a triad of key values: the actual, the possible and the necessary.

The actual is obtained, in the context of a video game, starting from the indexical term of a character managed by the player: the world in which this fictional entity is located is the actual one, and stops being so the moment in which it moves to another one. Therefore, this property is true or false according to the following question: is the character currently in this possible world?

On the other hand, the possible and the necessary configure, at the macrostructural level, different types of worlds, some merely accessible and others necessary for the progress of the game. This accessibility of worlds is defined as the most direct connection between the original world and the destined one, notwithstanding the microstructural conditions that exist for its completion, the primary criteria as the necessary between that destined world in relation to any possible other world. Therefore, the possible and the necessary are defined, respectively, from the following questions: "Is the possible world ludic and fictionally accessible in relation to the ludofictional system or any of its components?" and "Is the possible world structurally necessary for the coherence of the ludofictional system or any of its components?" From the relationship of these variables, we can yield the following table:

The relation of worlds according to the variables is not exhaustive – not in a strict application of the variables nor in the interpretation of the worlds – but allows us to devise some of the models that configure the main aspects of the ludofictional world framework. The results of the table may be grouped into the following categories:

		Actual (Indexical term)	Possible (composable in relation to the Ludofictional World)	Necessary (composable in relation to the Ludofictional World)
1	Primary current PW (Possible World)	Yes	Yes	Yes
2	Secondary current PW	Yes	Yes	No
3	Failed PW	Yes	No	No
4	Internal narrative PW	Yes	No	Yes
5	Extraludofictional PW	No	No	No
6	External narrative PW	No	No	Yes
7	Primary projection of past or future PW	No	Yes	Yes
8	Secondary projection of past or future PW	No	Yes	No

Table 1. Structure of worlds according to the actual, the possible and the necessary.

Primary Possible Worlds (PPW): Numbers 1 and 7. All of them are necessary and, therefore, must form part of the central structure of all ludofictional worlds. Thus, the set of worlds 1 is that in which the character is present, may contemplate it and, additionally, is necessary for advancing in the game. It is, hence, the backbone of the entire world framework. These types of worlds appear in the first video games in lineal order and with a naming that lets the player understand the progress. Different levels, screens or scenes establish an iteration within the game but with certain modifications – for example, greater difficulty or different enemies. This basic structure collaborates with another important world, number 7, which establishes the

projection of past and future possible worlds. In other words, world 1 is, in the first instance, world 7, and only after updating it by transforming from world 1. Thus, the indexical term anchors a actual world but evokes future levels. This pro-future projection may have different scopes, from the immediate – the next playable level – to the greatest distance possible to the final game world. In some cases, the past world 7 becomes impossible to access – the property of the possible becomes negative – as occurs with the coincidental collapses of roofs or sealed roofs that do not allow players to return to the previous level. In any case, and by virtue of the minimal ludofictional world principle, every game will provide at least one primary possible world.

Secondary Possible Worlds (SPW): Numbers 2 and 8. The secondary possible worlds are ludofictional offerings that the player may accept without destabilizing the structure of ludofictional worlds. This does not mean that these worlds cannot have an impact on the structure – for example, collaborating in the determination of different game endings – but their lack of necessity thus implies a restriction. The most common cases occur in *sandbox* games or open-world games in which the primary possible world becomes a transfer space that makes it easy to access a type of secondary world called *quests*. Quests do not necessarily influence possible worlds although they can influence ludofictional elements such as the character's traits – as in the case of experience levels in role-playing games – or the granting or removal of objects.

Narrative Possible Worlds (NPW): Numbers 4 and 6. This category implies a narrative-audiovisual interpretation of a type of possible worlds that categorically denies the possibility of games – number 6 – or restricts it in some way – number 4. In the world of 6, the suspension of the gaming aspect is done in the system of worlds to show a cinematographic cutscene. In other words, all user interaction is suspended and the player's indexical term is lost to make way for a video scene, either to introduce the game's fictional framework – when there was no previous

interaction – to give a dramatic ending to a world – for example, with the spectacular appearance of a powerful enemy – or, to move the game to other spatial-temporal coordinates. In contrast, in the world of 4, an *ingame* scene allows the game's visual model to be maintained without resorting to suspension, leaving a certain margin of agency, as occurs with so-called *quick time events*, punctual actions by the player in an essentially demonstrative fictional context. Narrative scenes in video games have been the subject of profound debate when the suspension of playability is made in favor of display (Eskelinen, 2001; Klevjer, 2002) although currently most games combine the proposed strategies for worlds of 4 and 6 efficiently, especially when fictionalizing the new goals given to the player.

Extraludofictional Possible Worlds (EPW): Numbers 3 and 5. This category configures a set of worlds that, for different reasons, cannot participate in the ludofictional structure. Thus, the most categorical case is that of world 5, which cannot be actual, nor possible, nor necessary. In other words, it is a world that does not participate nor can participate in the system and, strictly speaking, cannot belong to the ludofictional world since it involves the negation of all its modal values. In contrast, in type 3, the player faces an actual world that cannot be played nor is necessary, as in the most common case of a graphic error that allows passing through walls, climbing walls or getting trapped in a scene background. In other words, the player faces a bug unanticipated by the designer that lets him do things unexpected in the normal development of the game.

By seeing these types of worlds, we can better appreciate the role and relationship between them with the example proposed in Figure 4. In this case, the character is in any PPW – what we shall call Level 1 – and, therefore, its indexical term determines that it is his actual world. This starting PPW is composed of some ludofictional elements that will determine, among other things, possible access to other worlds, thus positioning Level 2, the following PPW in relation to structural necessity, as in the

primary but projected world. In other words, the player must surpass the PPW1 to access the PPW2 and successively until the ending of the ludofictional world.

But additionally, from this position, the player will be able to access an SPW – it is optional, it does not have a structural and necessary link with the worlds' framework – that, in turn, may project other secondary worlds that will necessarily be placed in relation to SPW1.

To finalize this example, a possible narrative world is shown, either through an ingame scene or a cutscene, which triggers a fictional refocusing: if in PPW1 the character faces X fictional and ludic properties, the projected PPW – which will be PPW2 when it is updated by the indexical term – may be modified thanks to the ellipsis elicited by the possible narrative world. For example, the character in PPW1 may have to overcome a timed trial in an enchanted house in 1920 and, after the justification posed by the Possible Narrative World, the character must eliminate a very powerful enemy, with no time limit, in a castle in 1930.

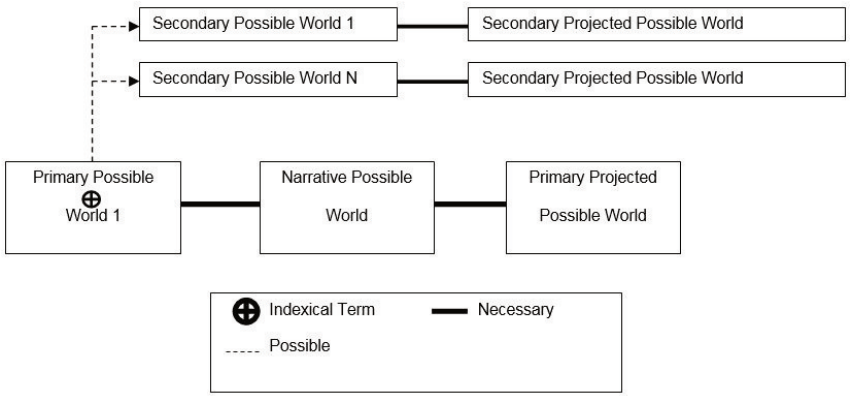


Figure 4. Example of a framework of possible worlds.

In the following section, we will carry out a small analysis of the video game *Civilization V* (Firaxis Games, 2010) from the static

macrostructural dimension to show the operability of some of these categories.

4.3.2.- EXAMPLE I: THE STRUCTURE OF WORLDS AND GAMING EXPERIENCE IN CIVILIZATION V

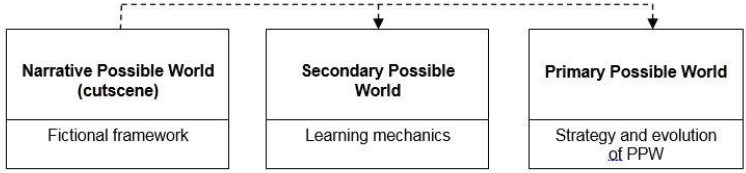
Civilization V is the fifth installment of the famous turn-based strategy saga for PC made by Sid Meier. Sid Meier's video game has at its existing core, a total of 18 civilizations, each one with their leaders, along with barbarians and City States. In this game, the user must advance his civilization through basic actions of discovery, construction and destruction so that, with social, economic and politic evolution, one of the posed objectives can be achieved. *Civilization V* provides NPW cutscenes to frame the fiction and SPW "tutorials" to explain the basic principles of the objectives and, in addition, to show the internal structure and evolutionary system. A single primary possible world is configured (PPW) that may be produced randomly or through historic scenes, but once established does not allow the transfer to another primary possible world: everything occurs in the same diegetic space. In other words, the Firaxis Games video game does not set forth a linked set of different PPWs but rather a single PPW that must evolve in itself. This PPW has the following ludofictional elements as an objective: Conquest "The civilization achieves territorial hegemony by being the only one to preserve its capital," Culture "The civilization achieves a cultural victory with Project Utopia," Science "The civilization constructs a spatial transport powerful enough to colonize space," Diplomacy "The civilization achieves international leadership through the United Nations," and as a final objective, the civilization with the most points by the year 2050. It is an exclusively multiplayer game – multiplayer or against an AI – so by the non-contradiction principle, only one player can achieve the upgrade of one of these types of worlds.

In this way, *Civilization V* proposes five objectives that channel the entire game structure. Therefore, the player's choice does not only define a future objective, but also the whole evolution

– the events – that the civilization itself will have: if military domination is chosen, the strategy will be oriented towards the creation of troops, while cultural or scientific objectives will drive the construction of buildings and the recruitment of great intellectuals – Great Generals, unique units that give important bonuses – and scientists. However, the game proposes two lines of hegemonic conflict: military and diplomatic. It is practically impossible to win the game without being attacked by some enemy, because warlike confrontation will always be present, whether or not the player wants it. In the same way, international relations will determine not only the number of nations involved in combat but also the agreements with City States or victory by diplomatic means. Therefore, the possible states among existing ones are conflicting: neutrality or alliances. Its diagram can be summarized as follows:

In this way, the player may choose to start his ludofictional experience from a non-necessary possible world – the tutorial – or, if he already knows the game mechanics, he may start to modify the PPW according to his strategy: belligerence, diplomacy – good relations with other nations and with City States – and cultural or scientific strategies – supporting libraries and research centers with public funds. The self-sufficiency of the PPW, and the main motivation of the player thus responds to the choice of one of the objectives that configure victory over the other players.

Therefore, *Civilization V* proposes a unique world model with different victory objectives and in this sense, resembles the idea of board games or doll houses like *The Sims* with a model of a turn-based strategy game with linear scenes.



Primary Possible World					
Existing	Events	Starting Point	Objectives	Conflict	Balance
Fictional entities: 18 leaders and civilizations	Actions: Discovery, construction, destruction	Random or customized world. Inheritance per saved game.	Conquest Culture Science Diplomacy Default	Only military and diplomatic	According to objectives
Space: Random map/ Historic map	Events: Diplomacy, internal politics, army, investigations, Great Generals				
Others: Barbarians/City States	States: Among existing: conflict, neutrality, alliance				

Figure 5. Static macrostructural dimension in Civilization V and Primary Possible World descriptors.

4.4.-THE DYNAMIC MICROSTRUCTURAL DIMENSION: FICTIONAL ENTITIES, SUB-WORLDS AND GAME BALANCE

4.4.1.- ACTION, INTENTION AND MOTIVATION AS GAME ENGINES

One of the main concerns of traditional Narratology has been knowing how to configure the syuzhet/story in relation to a given fable/story. Thus, the *what* and *how* have regulated essentially formalist perspectives that have placed space-time structures on the front lines, i.e. *where* the action happens and in *what* moment. And unlike traditional mediums, Alexander Galloway has seen a new medium based on action in video games. Thus,

> "What used to be primarily the domain of eyes and looking is now more likely that of muscles and doing, thumbs, to be sure, and what used to be the act of reading is now the act of doing, or just "the act." In other words, while the mass media of film, literature, television, and so on continue to engage in various debates around representation, textuality, and subjectivity, there has emerged in recent years a whole new medium, computers and in particular video games, whose foundation is not in looking and reading but in the instigation of material change through action." (2007, p.25)

According to Galloway and from our ludofictional perspective, the linking of worlds as possible and/or necessary alternative displaces a second term for matters related to the point of view or the anachronisms for establishing a theory of action as a hegemonic model consisting of intention and motivation of both the user of the game and the constellation of different present fictional entities in the fictional world.

The act of playing, therefore clusters several types of actions that may be located on the two main axes. The first one differentiates actions within the diegesis of fiction from those extradiegetic actions, while the second refers to their performer: the operator – which we shall call the player – or the system (Galloway, 2007, pp.25-28). Figure 6 shows the relationships that are established between both axes.

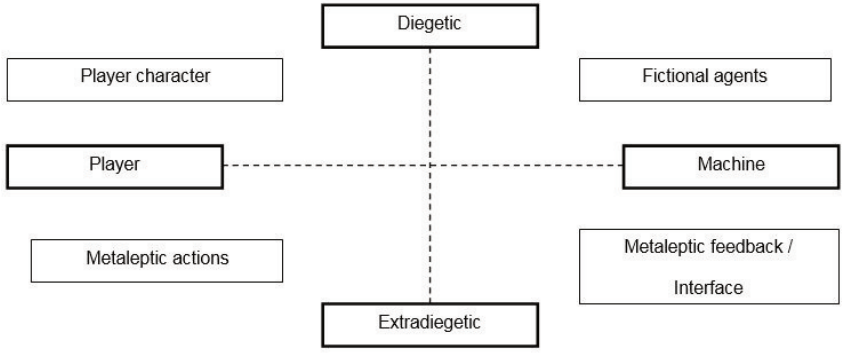


Figure 6. General typology of actions in the worlds' model. Source: Adapted from Galloway, 2007, p.32

The dynamic microstructural dimension especially refers to the actions that reside in the diegetic plane and that correspond, in general, to the microstructural impulse that the player has – the decisions within the diegesis – as well as the available actions for all fictional agents belonging to said world. In contrast, the analysis of the metaleptic dimension, which corresponds to the sections we shall see later on, establish its focus both on the extradiegetic element and the rupture of certain fictional levels that are produced within the fiction itself. Therefore, in this section we shall summarize actions within a diegetic plane and the rest of the fictional entities and their impact on the gaming environment, in connection to the player.

An essential property of all action is its attribution to a given possible world and it is divided, in this case, among the possible, impossible, necessary and non-necessary. The mutability of this property is key both for understanding the transfer between worlds and for establishing strategies and game modes in relation to fictional entities. In certain moments, opening the door – which would take us to the next level and, therefore would advance the indexical term – is not possible because we do not have the relevant key, but this property will change when we obtain this object.

However, we must differentiate between those transitory possible/impossible actions and those that are categorical. The movement of the character is a categorical possible action, the impossibility of abandoning the screen by its borders is as well. In other words, the necessary/non-necessary property is inscribed in the categorical by a simple matter of stability in the possible world that enables it. Thus, all possible worlds always have a set of prescribed actions for all fictional entities that cannot change from necessary to non-necessary, although they may be transitorily possible/impossible. For example, in the context of a given world, the action of "eliminating the orc boss" is always necessary for the completion of the world – he is the final boss of the level – but it may not be possible at the

beginning of said world, either because it is necessary to obtain a weapon or fulfill a previous mission. Only when the property changes from the impossible to the possible is the necessary action enabled; however, its state for that given world can never be modified – i.e. the level cannot be surpassed without the completion of said action.

On the other hand, non-necessary actions fulfill the freedom of entities by letting them do tasks that, while not essential for the completion of worlds, can enrich the gaming experience. However, the accumulation of certain non-necessary actions may be, in reality, necessary. In some games, certain worlds cannot be surpassed if the characters have a specific level that is only obtained through non-explicitly required actions to advance in the game. In this case, non-necessary actions individually fulfill a necessary role as a group.

For Dolezel[8], a great follower of the logic of modern action founded by Von Wright (1963), all action implies the physical intervention of a fictional agent in an event, i.e. in the passage of one state to another. When this intervention only affects the person acting – for example, his properties – it is called intransitive, whereas if it produces a modification of a fictional world, it is called transitive.

This theoretical framework of action may help us understand the role that the dynamic microstructural dimension plays in connection with the static macrostructural dimension for the creation of a given gaming experience. Both the player and the fictional agent are necessary for performing actions that dynamically drive a predesigned world from the static. In other words, only when the player commands the shooting, the agent shoots and a change is produced – an event – more or less

8. To expand a theory of action inscribed in a model of ludofictional worlds, we will make constant reference to the work of the Czech theorist. His adaptation of the issue of world semantics from different theoretical perspectives, which have addressed the concept of action in contemporary thought, enables its transfer to the field of Game Studies.

meaningful to the agent and/or the environment. But additionally, video games constantly combine intransitive actions with transitive ones. In the first case, the movement of the agent or the use of certain finite properties – weaponry, special powers – does not revert to the environment, whereas in the case of transitive actions, this does happen. However, the ludofictional design of games tends toward hybrid actions: shooting an enemy involves an intransitive action – we lose ammunition – and at the same time a transitive one – the enemy dies. And it is in the transitivity where asymmetry is produced – and the ludic potential – between the player character and fictional entities. While the hero has the ability to act in different ways in the environment – for example, through a vast repertory of weapons and attacks – enemies have a notable restriction on the number of available actions. Thus, the asymmetry of actions between agents not only fictionally defines who the hero is and who the enemy is, but also collaborates in the increase of difficulty of ludofictional worlds. The less asymmetry between agents – similar attacks in terms of power and damage, amount of life and armor resistance – the greater the proposed goal. In this way, games with progressive difficulty tend to show a great asymmetry between agents throughout the fictional transfer until showing a *final boss*, a particularly symmetric enemy who gets the main fictional agent in trouble. In contrast, certain particularly difficult games – popularly called *hardcore* games – reduce asymmetry as much as possible, even for ordinary enemies, such as what happens, for example, with *Dark Souls* (From Software, 2011), or leave the player character defenseless when facing superior supernatural forces, such as *Amnesia: The Dark Descent* (Frictional Games, 2010).

Another method of perceiving actions in relation to possible worlds is by their impact on the present and future ludofictional elements. In this way, actions may be tend towards destruction, destruction-creation or the construction of different objects or properties.

In the case of action as a generator of destruction, it produces a decline of the fictional framework in favor of reducing its own elements. These types of games, which can be originally identified with *arcades* and, subsequently, with the *blockbusters* of the *First Person Shooter* (FPS) genre, seek the adrenaline-based gaming experience with the eradication of enemies and the gaming scene. An evolution of this logic can be seen in the actions of the destruction-creation type, where the elimination of certain fictional elements provide new ones, whether objects or certain properties. Thus, in role-playing games such as *Diablo 3* (Blizzard, 2012), destroying barrels or furniture leads to the obtainment of objects – weapons, coins – or the alteration of agent properties – recuperation of life, increase in experience.

In contrast, the action-construction is based on the gaming experience of ludofictional worlds from a different perspective. Here gameplay is oriented towards the cooperation of different element for the obtainment of others and the minimization of destruction. Game like *The Sims* apply it in a key way, while some relevant online games such as *World of Warcraft* introduce it as complementary and optional through the ability to create objects or *crafting*. Figure 7 shows, in a schematic way, the properties of each action that can be ascribed both to the player character and the rest of the fictional entities:

All these macroactions usually are associated with two superior and inclusive orientations: intention and motivation. The available action to the user "shooting an arrow at the orc" is associated in general with the intention to "kill the orc," which in turn participates in a motivational complex that could be, for example, "to obtain the treasure that the orc is guarding and that is located at the end of the cave."

In the case of intention, the player must clearly perceive what the short-term objective in the set of actions that he has available and, additionally, he must be able to evaluate the advantages and disadvantages of carrying out this intention. Having the

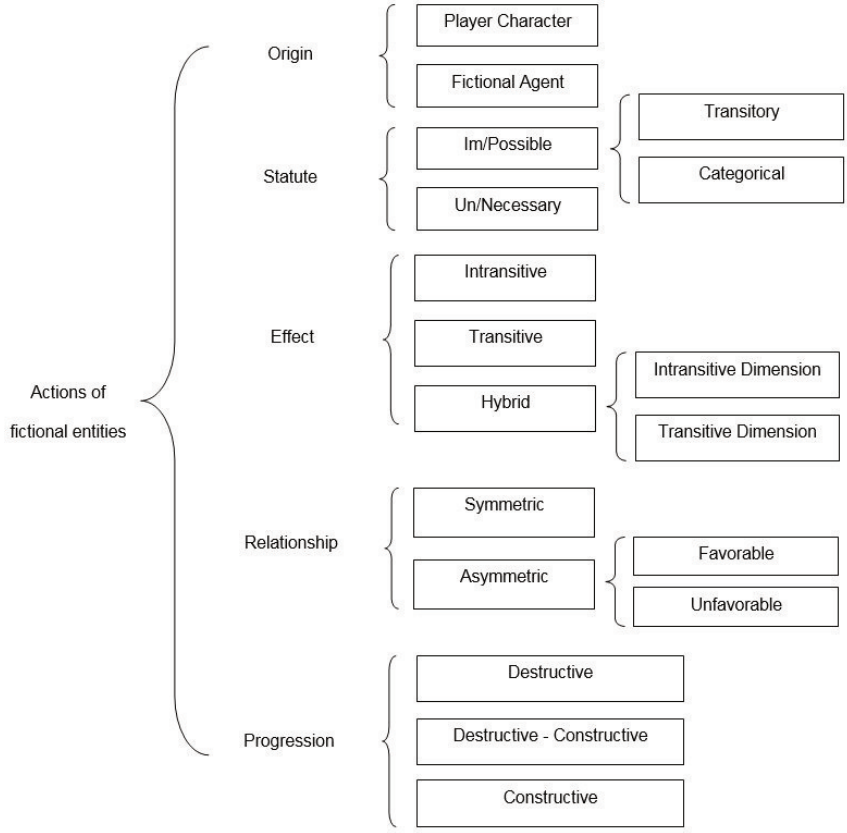


Figure 7. Properties of actions.

intention of killing a dragon in level 60 using different weapons and spells cannot be evaluated in the same way as a character in level 59 or one in level 10. But also we must keep in mind others' intentions, i.e. those attributable to enemies – through strategies and methods of carrying them out – and the non-player characters – their collaboration or opposition to certain attitudes of the player character – but also to facts without intention. In this latter case, the issue of natural events and accidents is key.

Natural events – actions without intention – create a sense of defenselessness in video games, a luck of the draw that takes

away the planning from the player's actions. Natural disasters present in *Sim City* – earthquakes, fires, hurricanes – may easily ruin the careful planning of the metropolis, while the presence of a skeleton with a black hood and scythe in *Theme Hospital* personifies – not without great humor – the inevitability of death when managing a health center overflowing with the ill. Even the natural fundamental event for all beings, birth, has been represented in the video game *Fallout 3* (Bethesda Game Studios, 2008): at the beginning of the game, we attend the birth of our agent from his subjective point of view.

On the other hand, accidents as non-intentional events are not so common. Death in video games is mostly intentional – an enemy wants to kill us – although it is possible to die from clumsiness or lack of control in actions taken, by falling off a cliff or being run over by a car. But regardless of death as an intentional or non-intentional event, video games have long planned that the complex iteration of actions implies, in itself, a great number of failures. The character's death or failure in the game balance is something very common in the transfer between worlds, so the majority of games provide a saving system that allows the conservation and subsequent restauration of the indexical term in a given game to "keep trying."

But without a doubt, the main driver of making decisions is found in the configuration of motivation[9]. One of the main mechanisms for establishing it is from gameplay using the main objective of the game, even though it does not prevent the player from assuming different motivations for the same goal – for example, we can enjoy *AngryBirds* (Rovio Mobile, 2009) without caring about the motivation of the suicidal birds but by simply establishing our own motives. This explicit nature of player motivation aims to give meaning to the gaming experience itself. Thus, the attribution of actions and possible worlds come from

9. It must be differentiated from the motive, seen previously with Tomashevski (2004). While this obeys a concrete action, motivation encompasses several of them and becomes a systemic phenomenon.

an initial impulse that is solidified as an idea, such as saving a princess, freeing a friend or avoiding the destruction of the planet, but often lies more in the behavior of the hero than the player. Thus, even if ludofictional worlds always refer to a system of diegetic motivations, they do not have to be shared with the player. Within the same game, a player may join the hero's cause, saying "I'm going to play this game to kill the dragon" while another may assume a completely different motivation such as "I'm going to play this game to take my hero to the next level." In fact, emotions represent a powerful – and little studied – source of motivations for every player (Dolezel, 1999; Cuadrado, 2012). Each game seeks to emphasize one or several motivations, sometimes in a complementary way, such as action and fear in *survival horror,* or speed and aggression in certain driving games, which tend to be understood from fictional and/or ludic logic. In this way, often the diegetic-fictional motivations are related to a set of physical sensations derived, for example, from the system of haptic controls and the main mechanisms of access to the fictional world present in games such as *Fahrenheit* (Quantic Dream, 2005) or *Heavy Rain* (Quantic Dream, 2010).

In contrast, enemies are not used to externalizing motivation, but are defined by their own actions. In games with more developed fictional worlds, more charismatic enemies do what they do for one or several motives, while simpler agents are limited to taking actions. This does not mean that they do not have motivations, but simply that they are not manifested.

Therefore, action – along with intention and motivation – involve not only a mere possibility but the main form of transfer between different static and predesigned worlds and, hence, the essence of all video games. However, the player is not alone in his task, because, among other motives, his extradiegetic existing condition does not let him physically enter the ludofictional world. To do so, he will always need a mediator agent, a fictional entity that will play a key role both in the choice of possible worlds and the configuration of the dramatic emotions.

In the following section, we shall see in greater detail characters and their motivations, but now it is enough to frame them in the final part of a possible world's game process. As we said earlier, worlds pose one or several objectives, a way of solving them and a final evaluation of the results that may allow, or deny, access to subsequent worlds. If the intention and motivation ground the objective and the way of obtaining it in a fictional way, the actions are explained in a ludic way. Throughout this process, the player interacts with different agents and, finally, obtains the so-called game balance[10] (Cuadrado, 2012), the evaluation of the hero's performance throughout that world.

Game balances give meaning to the entire structure of the world to which they belong, in order to achieve the final result, even if the evaluation may depend on the completion of previous conditions, such as the finishing of a level in a given period of time, or else the assessment is directly denied. The game balance also is given a double ludofictional dimension (Figure 8).

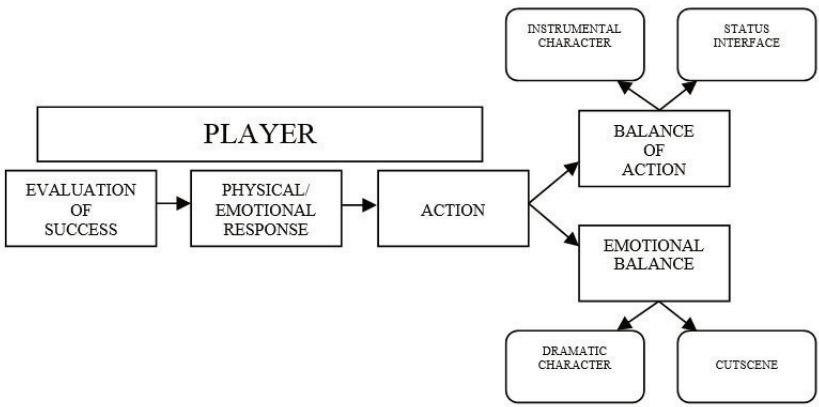


Figure 8. Action and game balance. Source: Cuadrado, 2012.

10. This concept should not be confused with the game balance in game design that "consists of the quality of balance/imbalance in the game design with respect to the value of different activities and components of it" (Pérez Latorre, 2010, p.167).

The balance of action – understood here as the grouping of necessary actions for the fulfillment of world objectives and not as an isolated action – provides a mathematical count, an empirical evaluation of performance of the agent used: the obtained points are tallied, become lives or level advances for fictional entities, or reach the comparative scale of the *High Score*, to give several examples. But the count does not just end with the quantitative but also often in the end of the world, also implying the emergence of drama. Thus, the balance of action becomes a dramatic balance and tends to be used through ingame scenes or cutscenes, which here we have previously called Narrative Possible Worlds. This type of balance is particularly relevant in games with complex fictional content, such as the case of role-playing games and graphic adventures, since it allows, in contrast, the audiovisual production of effects of the player's actions in the environment and, also, facilitates inter-world transfer and knowledge.

As previously stated, actions are the main engines for game impulse, but these actions are not limited to the player and his motivations, but rather are also carried out by other relevant fictional entities. In the following two sections, we shall establish first which types of agents exist and how they relate to each other, and second, what role mental sub-worlds play in such characters, with the choice of alternatives and the emergence of drama in the most developed ludofictional worlds that exist today.

4.4.2.- THE FICTIONAL ENTITY IN VIDEO GAMES: RELATIONSHIPS BETWEEN THE PLAYER CHARACTER AND FICTIONAL AGENTS IN THE FRAMEWORK OF GAME CONSTELLATIONS

One of the major shortcomings of characters is their limited study in the area of fiction theory. Both Narratology and Semiotics saw in the work of Propp (1928) and Greimas (1966) a practical position by simplifying these beings to mere collaborators of the story: characters fulfill function, a role as actors in a specific story, and nothing more. In contrast, here

we propose a Semantics perspective of Possible Worlds that "presents characters as people for and in action" (Dolezel, 1999, p.89), giving them new complexity that allows us to perceive a set of motivations and intentions that sustain their role in fiction.

On the other hand, the study of characters in video games has been configured, mainly from the industrial perspective, with a strong aesthetic and narrative heritage in American film (Adams and Rollings, 2006; Sheldon, 2004), while academically some recent studies have aimed to emphasize the role of the character from social psychology (Isbister, 2006), the study of personality (Lankoski, 2010) or their performative relation to the user (Fernandéz Vara, 2009). So, what do we mean by characters in video games?

For Alfonso Cuadrado, characters can be divided into avatars[11], subjects whose physical configuration, attributes and control fall to the user: virtual agents, characters emulated by the system, and virtual doubles, beings that get their attributes from a synthetic double. This division already can give us the first hierarchy between subjects controlled by the user or the system, i.e. a division between controlled actions by the "Player-Diegesis" and "System-Diegesis" fields, and what we shall call, respectively, "Player Character" – later PC – and "Fictional Agents" – later FAs.

It is important to note that, in our ludofictional model, the Player Character is not a simple design option, but rather a basic structural necessity. Thus, if the transfer between worlds necessarily establishes an indexical term – what is the game's actual world? – then it is evident that we need a fictional anchor that determines it. In the same way, denying the existence of the PC would be equivalent to denying the mediation between the

11. There is a certain critique of the term "avatar" for its connection between the user and the embodiment it seems to evoke. This debate can be seen more extensively in Fernández Vara, 2009, p. 202 et seq.

diegetic world and the real world, or, what is the same, affirming that the player himself may access the diegesis.

Therefore, we shall consider the PC as an essential mediator in the "Player-Diegesis" field but whose implementation does not have to be equal in all video games. In fact, genres have managed to establish with time archetypal ways of character appearance, the most common of which are the character in level 0, the character-portrait and the autonomous character.

The character in level 0 consists of the minimal expression of this being, the transparency between the fictional and ludic dimension. His performance in the diegesis is established "on point" between the environment and the player, and his main motivations are, in general, unknown and irrelevant. This form of PC appears in several arcades and puzzle games such as *Tetris* or the more current *Angry Birds*: we do not know why the character wants to solve lines or shoot birds, but, on the other hand, the ludic configuration of this type of world does not demand nor need it to function.

The character-portrait is an evolution of level 0 with the intention of giving greater fictional content to a given ludic proposal. Thus, this occurs, for example, with the painful grimaces that the player's portrait shows in *Doom*. Conversely, some other games have associated this framework with some specific properties, such as special powers according to the chosen PC.

For example, in the card game *Bang!* (Spinvector, 2011), the choice of the PC determines not only a fictional framework – we play with a fugitive, or a dangerous thief – but also a set of advantages and disadvantages associated with them. In this typology of characters, motivations can be shown, although in general they are fairly simple.

In contrast, the autonomous character has already managed to give himself a complex personality that prefigures him as a

classic hero who manifests his doubts, fears and objectives. The available actions have a strong link to the intentions and motivations explicit in his design. This is the case of some of the great characters of popular games such as Guybrush Threepwood, Jack Sheppard or Kratos.

Regardless of the type of PC present in the video game, its mere existence already configures, all round it, a fictional world. In some extreme cases, the creation of the world is limited to that same PC, thus making it a pure one-player world. These proposals are very focused on the individual game such as the puzzle or occasion pastime – minesweeper or solitary – or the clear-cut evocative and transcendental game. In this last case, *Dear Esther* (Thechineseroom, 2012) is a paradigmatic and unique work. Here the PC does not have choices nor other FAs to establish relations. The PC is limited to drifting, admiring the scenes and recovering a fragmented history throughout an unknown island. Similar to *Robinson Crusoe* (Daniel Defoe, 1719), *Dear Esther* proposes a journey of contemplation before action and thus several critics have rejected the character of the game.

Multi-player worlds provide precisely a configuration regarding a completely different PC. In this case, the player either faces hordes of enemies – as in the SPW – or is located in a universe of FAs with different levels of relevance: agent-portraits that do not intervene in the game – the audience in a soccer game in *Fifa 13* (EA Canada, 2012), spectators in the fights of *Street Fighter X Tekken* (Capcom, 2012) – autonomous agents with some type of specific function – pedestrians in *Grand Theft Auto V* (Rockstar, 2008) whose only mission is to defend themselves if they are attacked – or a secondary character with a significant impact on the transfer between worlds.

The fabric of relationships between the PC and different FAs – alliance/opposition, symmetry/asymmetry, among others – configures the so-called constellation of fictional entities, the basic diegetic framework by which the player must navigate if he wants to surpass the ludofictional proposal of the game. Some of

these constellations foster a more physical rather than dialectic relationship, generating an essential conflict for understanding fighting and platform games, while others are more favorable to balancing both perspectives, as occurs in graphic adventures and role-playing games. Sometimes, the constellation allows transitive actions that let the user determine part of the planned conflicts between the PC and the FAs. Therefore, in the saga *Mass Effect* it is common that in certain moments the user can choose the PC's reaction based on aggressiveness or understanding. This choice will determine both the PC construction and the future fabric of the constellation with other FAs.

With the establishment of broadband internet and online games, constellations have gradually incorporated characters from other real players into the FA tradition. Thus, our diegetic relationships are no longer limited by the context of a world, but have transcended the real world in the form of *guilds*, groupings of players that plan their future actions together in online fictional worlds. These types of digital relationships have driven other play forms, specifically with the emergence of social media as an ad hoc model of game constellations. If traditionally the asymmetry of transitive action fostered a model of power suppression – for example, eliminating the enemy race in *StarCraft* – the arrival of a different audience, generally feminine – has configured worlds where the idea of game as power is not configured in the competence between PCs, but rather the cooperation between them to achieve a common goal. Possibly, the best example of this is *Farmville* (Zynga, 2009), the super famous game of the creation and management of farms hosted on Facebook. In this game, the constellation of PCs is formed by the users themselves on the social network, contacts that do not intend to compete but rather collaborate to improve the farms and available crops.

Thus, the online game with "real" players is configured from relationships of the constellation and the perception of the type of power in play. The actions and motivations of each one its

members guide the choices of the others and generate, not uncommonly, conflicts in the form of meeting objectives. But what happens with the more traditional constellations formed by FAs? What role do these entities' motivations play in the choice of available alternatives for the PC? In the following section, we shall respond to these questions with the aim to see how psychological worlds and game strategies have a key role in two forms of resolving a goal: action balance and emotional balance.

4.4.3.- SUB-WORLDS AS EVOLUTIONARY MOTIVES IN THE LUDOFICTIONAL SYSTEM AND GAME BALANCE

The gaming experience of most contemporary proposals unite, in the same ludofictional world, constellations of fictional entities that are divided by their availability of actions, as previously stated. If their control is regulated by an extradiegetic user, the fictional entity is called the player character, while if the control is regulated by a system, we classify it as a fictional agent. Regardless of the specific motivations of the player, the FAs of the most relevant games, whether Indie games – such as *The Binding of Isaac* (Edmund McMillen and Florian Himsl, 2011) or *Bastion* (Supergiant Games, 2011) – or more commercial games – for example *Uncharted 3 Drake's Deception* (Naughty Dog, 2011) or *L.A. Noire* (Team Bondi, 2011) – develop motivational systems that not only determine their personality – their "characterization" – but also the type of possible relationships with the player character and the set of actions in each one of the worlds of the ludofictional framework.

Albadalejo (1998), aware of the relevance of motivations for fictional characters, sets forth the existence of individual worlds of a motivational kind (iW) exclusive for each character that, in turn, is subdivided into sections or sub-worlds (SW), according to two main criteria. The first one establishes the existence of at least as many individual worlds (iW) as characters that conform to the structure of the referential set – what we call, for the study of video games, ludofictional worlds – thus represented as follows:

W-SRS : = : <iW1, iW2, iW3, …, iWn>

In which the "world of the structure of the referential set (W-SRS) is rewritten (:=:) as the ordered set (<…>) which shapes the individual worlds (iW) 1, 2, 3, n" (p.71).

The second criteria established that each one of these individual fictional worlds (iW) may be divided, in turn, into sub-worlds according to the actions and experiences that the members of these worlds experience (iW). This approach implies the following formula – which must be understood following the symbolic structure described previously:

iW : = : <SW effective real, SW known, SW feared, SW feigned, …, SWn>

The subdivision of sub-worlds (SW) implies the appearance of psychological structures and knowledge of fictional characters. Through these sub-worlds, many real facts are made known by virtue of the real effective sub-world – for example, the member character of a pertinent existing iW, those which interact with him, etc…. such as those focused on knowledge – a known sub-world in which, for example, a character in an effective real sub-world could exist that has not appeared here from lack of awareness – or from emotions and mental states – feigned, imagined, feared, dreamed, loved, desired sub-worlds, etc. (p. 72).

As we can see, the analysis of individual worlds (iW) and their sub-worlds (SW) has great potential when describing what they are like, what they do and why the fictional characters do what they do. Their flexibility allows both the analysis of those worlds and essential sub-worlds for the emergence of drama – the inevitable collision between the desired sub-worlds of two friends in relation to the same woman, the sub-world of feigning and deception so decisive in Greek tragedy – such as those other more secondary worlds that allow the enrichment of knowledge about the origin and development of the characters throughout the fictional transfer.

That being said, what application does this methodology have in the field of Game Studies? Overcoming the initial phase of so-called "abstract games" (Wolf, 2003; Huhtamo, 2005; Planells de la Maza, 2011), video games started to create complex FAs to determine the game of the player character. The motivations manifested in the individual and sub-worlds of these agents serve, for example, to fictionally sustain the secondary missions – why should I fulfill the objectives of this mission? – to establish friendships, rivalries, betrayals and reconciliations and, ultimately, to give ethical-dramatic strength to a player's choices. This last case has been previously presented in relation to the saga *Mass Effect,* but involves a strategy increasingly used in video games, since empathy with the motivations of certain characters become relatively simple actions, such as eliminating a fictional agent in a traumatic murder of a friend and fellow adventurer. In the same way, the romantic relationships present in *Dragon Age,* the death of Aeris at the hands of Sefirot in *Final Fantasy VII* (Square, 1997), or the dismissive tone of Duke Nukem when exterminating aliens (*Duke Nukem 3D*, 3D Realms, 1996) involves both a register of actions associated with motivation and the personality of the agents as a basic pillar for the tone and style of the ludofictional world.

4.4.4.- ISSUES OF SPACE, POINT OF VIEW AND TEMPORALITY

Our ludofictional perspective established action as the central axis of the relationship between fictional entities and the progression of the framework of static possible worlds. But this action is framed, equally, in some important structural properties, such as space, point of view and temporality.

4.4.4.1.- THE INTEGRATION OF SPACE AND POINT OF VIEW

The study of space in video games has been done through different typologies (Pérez, 2010 and 2012; Fernández Vara, 2009, p. 161 et seq.; Nitsche, 2009; Egenfeldt et al., 2008, p. 97 et seq.) but the most useful for our work is that which relates the point of view with the playable fictional world. This relational

perspective refers to cultural factors as important as the evolution of the game throughout the years and its impact on genres, and makes physical worlds and the way we perceive them inseparable.

In this sense, recent research has verified how the evolution of the fictionality of video games has followed "a very similar path to that done from the so-called primitive film to the model of institutional representation" (Cuadrado, 2010, p.97), in particular with the configuration of different spaces and points of view. The different needs in terms of the configuration of more complex fictional worlds motivated the advancement of simple synthetic worlds, based on the paradigm of board games and theater, into vast spaces made up of cinematographic montage or virtual journeys, even reaching the sports multiview or the HUD (pp.100-105). We shall see each one of them in detail.

The paradigm of board games, the most archaic of all, fostered a bird's eye perspective with the movement of vertical and horizontal axes, a unique space without being "outside of the visual field" or without the passage of levels (pp.100-101), a homogenous illumination and an extreme head-on approach determined by the autarkic dependence of fictional world (Planells, 2011, p. 57). This paradigm evolved in two senses. First, with the creation of three-dimensionality in the scene through the isometric perspective, similar to that already produced in the 19th century with *pop-up* children's books and second, through *scrolling* – the lateral and vertical displacement of the entire scene as a model of expansion of the playable world (Cuadrado, 2010, 100-101).

Conversely, with the theatrical scene, the space already appears fragmented in different levels, which take into consideration the connections associated with a lateral point of view and a character with horizontal movement. This is the case with *Prince of Persia* (Broderbund Software, Inc., 1990), the graphic adventure or video adventure that arrived with the *cd-rom* and

technologies that would support cinematographic content in games (pp.101-102).

There are two paradigms closely associated to a genre typology, rather than a way of constructing space and point of view: the sports multiveiw and the HUD (Head-Up Display). The sports multiview starts from a television broadcasting model of sporting events, especially of soccer and basketball. The possibility of playing with a team on a field implies, on one hand, the birth of a third-person point of view and, on the other hand, the possibility of alternating different perspectives according to the camera we choose. Thus, the player becomes the maker of his own games. In contrast, the HUD model, a transparent interface that shows information, transforms the screen into a unique camera that was created with military aviation and that establishes the known first-person point of view where we see the space "through the eyes" of the player character, thus determining a set of content outside the field. This model has been very successful in *first person shooter* games (pp.102-103).

Finally, the most used paradigms for the fictionally of the most complex games have been, to this day, those of cinematographic montage and virtual journey (pp. 103-105).

The influence of film on video games in undeniable, both at the level of character and space design and with sound and perspectives. However, the impact of the cinematic narrative discourse always has been conflicting, especially after the arrival of technology that would allow games to be made with a great variety of mediums, real actors and filmed scenes, as in the case of *Phantasmagoria* (Sierra On-Line, 1995), which was a failure due to its lack of playability. However, some current games such as *Fahrenheit* or *Heavy Rain* have demonstrated that the cinematographic montage may convincingly join the display of a fictional space and different game possibilities. Thus, the multi-screen, the alternation of scenes or the change in point of view, along with a sophisticated soundtrack and a photographic hyper-

realism, allows a fruitful collaboration between the traditional cinematic art and new ludofictional forms of video games.

The last paradigm, regarding the virtual journey, allows a player to freely move through a three-dimensional space. It is interesting to see how the virtual journey not only has an immediate reference to the dream of Virtual Reality, but also especially to the modernization of the Cinematours or Hales Tours, exotic recreational trips on a movie screen that "consisted in offering not so much a dramatic narration or a comic gag but rather a temporal experience" (Cuadrado, 2010, p.104). This kind of game, very popular today, is extensively used in sandbox games – open world games that allow a very wide exploration of a space – and is used in general with a camera point of view that follows the character in third person.

4.4.4.2.- TEMPORALITY

The first complete study of temporality in video games was done by the ludologist Jesper Juul (2001), just as we have seen in the debate between ludologists and narratologists. In *Half Real*, his most recent work, Juul redefines his concepts and assesses two main times: *Play Time* and *Fictional Time* (2005, pp. 141-156).

Play Time determines the time that the player experiences the game, i.e. the effective real time, while *Fictional Time* refers to the temporality of the fictional world. In real-time games such as *Bioshock* (Irrational Games, 2007) or *Battlefield 3* (EA Digital Illusions CE, 2011), a 1:1 "projection" is generated: there is synchrony between the player's "now" and the player character's "now." Conversely, in sports games and those that allow the modification of the speed of time, the 1:1 relation is discussed. For example, in *Fifa 13,* every 3 minutes of *Play Time* correspond to 45 minutes of *Fictional Time*, while in the satirical managing of film in *The Movies* (Lionhead Studios, 2005), *Fictional Time* can accelerate up to 3 speeds. There also exists other phenomenon that alter this 1:1 projection such as the pause in *Play Time*, while

the game downloads data or the uncertainty produced when the player passes from one level to another.

The *cutscenes* that have been dominating current video games are seen by Juul as a disconnection between *Play Time* and *FictionalTime* in favor of a different conception of the passage of time that cannot alter game states. For us, this temporality of Narrative Possible Worlds does not disconnect both temporalities but rather denies the player's ability to intervene, in a transitory way, in the facts in favor of a coherent story; also it can modify states of ludofictional worlds. Some of these worlds usually modify existing ones – for example, an ally dies in the cutscene and in the following world is no longer available – or the spaces – the transition between worlds – without possible intervention of the player.

In her doctoral thesis, Clara Fernández Vara has compared Juul's approach to the study by Zagal and Mateas (2007), and has verified how Juul's *Play Time* is understood as *Real-World Time* to include not only the effective gaming time, but also the days and years in which said activity is carried out, which may be just as relevant for certain games that are celebrated in synchrony with our world festivities such as Christmas (2009, pp. 267-271).

Therefore, and from our perspective, the temporality of ludofictional worlds may be understood by the intersection of different approaches, which specify the real world time – the player's time or *Real-World Time* – the possible world time – the internal development of each fictional construct, which is assimilated as *Fictional Time* – and the Narrative Possible Worlds time – the unique temporality of each *cutscene* or dialogue, respectively. Additionally, in relation to possible world time, it is important to note, as we shall see further on, that the existence of intradiegetic narrators may alter the temporality of the world by establishing *flashbacks* or *flash-forwards*.

The following section exemplifies the utility of individual worlds and sub-worlds of fictional entities to study gender issues and

their true impact on the gaming experience. In this case, the construction of women in the role-playing game *Dragon Age: Origins* cannot be limited to a mere sexualized representation, but rather must be studied in detail regarding what motivations these fictional agents have and what relationships they establish with the player character in the relevant constellation.

4.4.5.- EXAMPLE II. THE CASE OF DRAGON AGE: ORIGINS. MORRIGAN AND LELIANA, TWO SIDES OF THE SAME COIN

Dragon Age: Origins (Bioware, 2009) is the ad hoc successor to the famous *Baldur's Gate* (Bioware, 1998) and its expansions. It is a role-playing game that offers the player a medieval fictional world on the verge of chaos. The lands of Ferelden have been devastated by the Blight, a horde of sinister monsters led by a fearsome archdemon. The appearance of the Blight every once in a while caused dwarves, elves and humans to create the Grey Wardens, a brotherhood of powerful warriors destined to face them, composed of soldiers and wizards of all sexes, races and social classes. With time, the races fought among themselves, and the brotherhood weakened until its practical extinction. The player must assume the role of one of the last Grey Warden in the dawn of the next Blight.

Dragon Age is inscribed in the genre of role-playing games in which the player can personalize the main character to a certain extent. Thus, in the avatar design of the protagonist, the player can choose the aspect, sex – man or woman – race – dwarf, human or elf – class – warrior, rogue or wizard – and the social status – plebeian, noble or urban. According to the chosen race, class and social status, the adventure will begin from one geographic point or another, and will include different possible worlds. Therefore, *Dragon Age* does not provide a linear structure – as occurs, for example, with graphic adventures – but an open ludofictional world with a set of primary possible worlds to overcome and secondary possible worlds that provide distraction and parallel adventures.

From the point of view of gender studies, the game equalizes man and woman in its ludic approach: the protagonist, regardless of sex, has the same typology of actions – including options of a homosexual nature. Additionally, the contempt/appreciation of travel companions for the main hero/heroine is not alternated by gender issues, but rather by a complex system where greater affinity to the character translates to greater game possibilities – from friendship or exchange of secret knowledge and new abilities, to romance – while conflict – for example, taking actions contrary to the ethical principles of a companion – may lead to the abandonment of the group or even armed conflict.

The ludofictional world of *Dragon Age* is configured through a constellation of agents and individual worlds of characters, which the player decides to interact with and integrate into his adventure group. It is relevant to note that the characters are not integrated by default – except the Grey Wardens Alistair and Morrigan, companions from the beginning of the game – but rather the player must decide if he chooses them or not. In this way, Leliana becomes part of the team if, after a combat mission, the protagonist decides to accept her help. The Mabari Hound will appear if it was helped in the battle of Ostagar – except if the protagonist is a noble human, in which case it appears by default. Sten, Zevran and Loghain Mac Tir are united by the decision whether to pardon their lives – during previous combat or not – while Wynne and Oghren will decide to follow the hero if he/she supports them in a war mission.

In this way, the predominant triggers for the existence of individual worlds in the ludofictional world – and therefore, the appearance of game possibilities, personal histories and sub-worlds – are defined by three large dramatic situations and one by default:

> 1.- Situation by default. As a general rule, Alistair (iWA) and Morrigan (iWM) will become part of the group automatically. This makes sense for they make up the

constellation of basic agents required for every future primary possible world.

2.- This companion character helps the hero in a previous conflict and, after this feat, requests her admission to the group: Leliana (iWL).

3.- This companion character proposes – or joins – a war mission with the hero. After overcoming it, he decides to become part of the team – i.e. he does not request admission, but rather his admission to the team is contingent on the completion of the mission: Wynne (iWW) and Oghren (iWO).

4.- This companion character's life is saved by the direct aid of the protagonist and requests his entrance into the group: Such is the case for the Mabari Hound (iWMH) who the hero cures of poisoning, Sten (iWS) who is freed from his jail cell and the death penalty, Zevran (iWZ) who after a battle the hero must decide to kill or pardon, and Loghain Mac Tir (iWLMT), who after a duel the hero must decide to kill or pardon.

Therefore, the world structure, in accordance with the default situations and the possible situations configured by the additional individual worlds, is:

WDA : = : < □(iWA, iWM) ◇(iWL, iWW, iWO, iWMH, iWS, iWZ, iwLMT) >

In which the "Ludofictional world of *Dragon Age* is rewritten (: = :) as the ordered set (<…>) which necessarily forms (□) the individual worlds of Alistair and Morrigan (iWA, iWM) and, as a possibility (◇), the individual worlds of Leliana, Wynne, Oghren, the Mabari Hound, Sten, Zebvran and Loghain Mac Tir (iWL, iWW, iWO, iWMH, iWS, iWZ, iWLMT)." As shown here, the two individual worlds belonging to women – Morrigan and Leiliana – are located in two different positions. The integration of

Morrigan is a necessary action for shaping the ludofictional world – notwithstanding that the player relates more or less with her – while the incorporation of Leliana is only one possible action. Now we shall proceed to the sub-worlds of each one of these individual worlds to analyze the psychological configuration that the game gives the female main characters and what influence they have on the player's game possibilities.

The configured sub-worlds of the individual worlds of Morrigan (iWM) and Leliana (iWL) give female characters a complex psychology.

Morrigian is a witch of the forest who lives with Flemeth, her mother, in the thickets of the Korcari. Strict maternal protection prevented Morrigan from associating with other humans, even though her abilities as a shapeshifter – a forbidden wizard gives her the possibility of becoming an animal – lets her approach, without being seen, small urban centers. Morrigan is a pragmatic, direct and curt character. She does not trust humans, religion – especially the Circle of Magi, an institution that ensures good magical practices – and, in general, actions related to kindness, solidarity and generosity. She praises freedom from nihilist postulates, and sees dangerous weaknesses in love and affection that may undermine the ability to survive.

Of the entire sub-world structure belonging to iWM, the most relevant are as follows:

1.- Believed Sub-world in connection with the Feared Sub-world: During most of the adventure, Morrigan does not understood the overprotective nature of her mother, Flemeth, in relation to humans. She believes it simply has to do with the protection every mother would have with her daughters, keeping in mind the inherent evil of humans. However, if the player continues establishing good relations with the character – through gifts, conversations and actions of the game in accordance with the pragmatic and inhuman nature of Morrigan – the Believed Sub-world is modified by another element,

essentially, fear. Morrigian will discover that Flemeth is actually an old abomination that needs to possess the body of her daughters to survive. From this discovery, Morrigan fears Flemeth and asks the protagonist to finish off the abomination.

2.- Feigned Sub-world in connected with the Desired Sub-world: This connection is manifested in two moments of the main story. First, and facing the romance of the player with Morrigan and/or Leliana, the character will feign, in a pathetic way, a lack of interest for the protagonist. In reality, her pretending does not come from a romantic desire – as may be in the case of Leliana – but rather a matter of sexual territoriality and envy. But the true potential of this connection appears at the end of the game – regardless of how the player arrived there – when Morrigan wants a child with the hero and then disappears. She pretends to give explanations: if she becomes pregnant, she can save the life of the hero in combat against the archdemon. And even if it is somewhat true, Morrigan wants a child for some means that is not clear at any point. However, Morrigan's explanations start from a certain truth, but the underlying reason – which is never explained – is not evident. She feigns a specific desire: to have a child.

Leliana is an Orlesian bard, even though her nationalist sentiments were always linked to Ferelden. Unlike Morrigan, she is a very religious woman, generous and trusting in the kind nature of humans. She is sweet, caring, friendly and, to a point, somewhat innocent. For years, she served in the Royal Court of Orlais, where she learned manners, singing, music and most of the world's legends. Her candid and affable character ensures her many friendships, among them Marjolaine, a bard whom she forges a very special relationship. However, Marjolaine takes advantage of her good character to involve her in a case of espionage. Leliana ends up in jail, waiting for her sentence, from which she manages to escape. Considered a traitor, Leliana seeks comfort in a religious congregation in the town of Lothering.

Of the entire sub-world structure belonging to iWL, the most relevant are as follows:

1.- Believed Sub-world: Leliana takes on a religious outlook by which she must help the protagonist in his fight for freedom, for his specific redemption. Leliana's beliefs are her most distinctive feature; her individual world is sustained to such an extent in this sub-world that any respect for it translates into her collaboration in the adventure, but any violation – for example, if the hero desecrates a sacred urn with ashes – implies not only abandonment of the group, but also a direct fight with the protagonist. Another important manifestation related to the Believed Sub-world appears with the secondary possible world regarding Marjolaine's revenge: Leliana suffers an assassination attempt – in which the character of Zevran is discovered – instigated by her old friend. After her encounter with him, she discovers that Marjolaine has tried to kill her by believing that Leliana, in turn and in revenge, was trying to do the same. Therefore, the Believed Sub-world transforms from a forgotten state without rancor – the past betrayal of Marjolaine – into an actual sub-world in which the character must decide, in front of the player, if she wants her old friend to die or be freed.

2.- Desired Sub-world in relation to the protagonist character: Leliana shows great empathy with the hero's cause and is easily impressionable. From the first moment, the character manifests her desire and the need for a closer relationship with the protagonist and she will see to his fulfillment if the player so desires. Likewise, her disputes with Morrigan about the player's romantic decisions manifests, numerous times, as a strong rivalry. This sub-world is especially important both for the ending of the ludofictional world, in which different epilogues are shown depending on the decisions taken, and the second part of the game.

3.- Desired Sub-world in relation to the Court Sub-world: The beautiful and dreamlike past of the Royal Court of Orlais make the character constantly sigh. It is not strange to encounter

explicit petitions to the hero related to this sub-world, such as jewels, gems or blue shoes that recall this delicate and high-end world. Thus, the Court Sub-world for Leliana in her conversations with the hero shows a romantic impulse towards the past, a much happier childhood than the present marked by exile, deception and war.

As we can see, Morrigan and Leliana present two types of very different women with great potential within the video game's fictional framework. In both cases, they are overwhelmed by a lack of acquired knowledge, needing the player's decision to illuminate the underlying conflict. In the case of Morrigan, this implies fear before a horrendous being, and in Leliana's an unpleasant reunion with a difficult past.

On the other hand, the two women represent completely opposite ways of being: Morrigan is asocial, pragmatic, anti-religious, distrusting and somewhat evil, while Leliana is social, kind, benevolent, profoundly believing and her faith in humans is endless.

Finally, the sub-worlds associated with desire express great motivational richness in the characters, both in their individual aspects – unknown and mysterious Morrigan, romantic and melancholic Leliana – and their conflicting aspects – the possibility of romances with the player and their influence on the desire, envy and pretense of the heroines.

4.5.- THE PLAYER, METALEPTIC NATURALIZATION AND BREAKING THE FOURTH WALL

4.5.1.- LUDOFICTIONAL WORLDS IN CONTEXT OF THE FEEDBACK LOOP

One of the most relevant concerns in the study of human evolution has been which elements make up the relationship between the subject and the environment. This debate is polarized between a biological Mechanism that defended the hegemony of the physical-chemical process, the classic

"stimulus-response," and a Vitalism that assumed the existence of something beyond the natural processes but that escaped all possible investigation.

At the start of the 20th century, the Functionalism of Von Uexküll (1942) meant "considering the organism as part of the environment and the environment as part of the organism (…) but the environment is not 'given' to the organism, but rather acts on the environment and actively contributes to configuring it. The environment is not so much a background scene by which the organism moves, such as a hotel room, but rather a flexible habitat that is occupied and remade by the organism to adapt itself" (Del Río, 2010, p.2). In this sense, Von Uexküll formulated the dialectic relations between the organism and the environment based on transformative action and the perception of its effects, which he called the feedback loop (Figure 9).

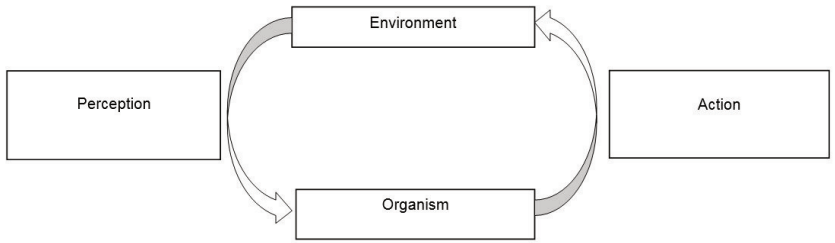


Figure 9. Feedback loop. Source: Del Río & Álvarez, 2007.

Subsequently, Historical-Cultural Psychology propelled by Lev S. Vygotski, whose influence would be key to the Environmental Ecology of McLuhan (1964), would see the main tools of social development in mediations. Thus, the so-called efficient tools – a spear, a sickle – transform in the environment, while psychological instruments have an impact on the interior of the subject – for example, the watch on the individual's perception of time, or changing the ring on a finger to remember something. Thus, the feedback loop may be understood not only as a simple and direct action and perception towards the environment, but also as a complex system of mediations, both instrumental –

objects – and social – use of other subjects – called the mediated feedback loop (Figure 10) (Del Río, 2010, pp. 6-14).

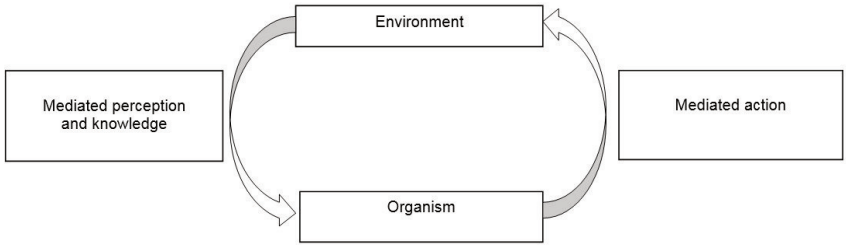


Figure 10. Mediated feedback loop. Source: Del Río & Álvarez, 2007.

The theory of ludofictional worlds that we are proposing in this research also implies, in relation to the mediated feedback loop, a system of mediation that frames a user's activity in the real world – the player – who access a specific environment – the ludofictional world – through a pre-established mechanism – mediated actions – and who perceives, in return, the results of his activity – mediated perception and knowledge. This model is called the videoludic feedback loop (Figure 11).

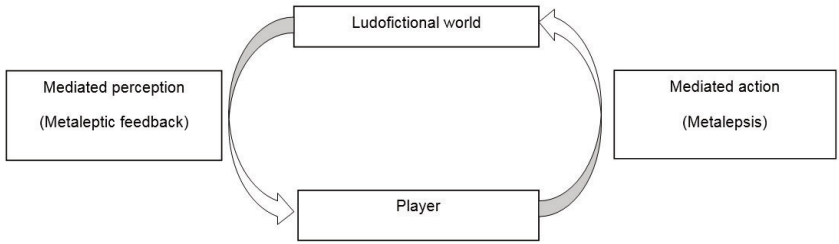


Figure 11. Videoludic feedback loop. Source: Adaptation from Del Río & Álvarez, 2007.

In this way, the videoludic feedback loop is inspired by the mediated feedback loop to explain how the configuration of mediations enables – and restricts – different actions and perceptions for the player and his activity in the ludofictional world. However, there are two important differences in both models. First, the mediated feedback loop configures, in most

cases, the activity of the organism within the environment, while in the videoludic feedback loop, the relationship is always established on the diegesis-extradiegetic axis. And, second, while the mediation possibilities in the first model are as broad as the environment itself, in the videoludic system, the mediations are explicitly restricted.

The videoludic model and the display of mediations of action and perception is subject to an important principle and is intimately linked to cultural learning: the principle of the *indexical term of intelligibility*. According to this, the competence and skill in the use of mediations depend greatly on the player's knowledge of the game mechanics and genre conventions. This occurs with the physical action from the pad control – from the controller Nintendo invented in 1983 to haptic controls such as Kinect – and also with mediated perception: the hearts that appear on screen in *The Legend of Zelda* (Nintendo, 1986), or the abundant icons on the existing interfaces in online role-playing game can be understood by learning after hours of play.

In the following sections, we shall analyze mediated action as the component of the videoludic feedback loop most intimately linked with the theory of action previously mentioned, which we understand as metalepsis in two senses. First, as the external rupture of the limits of fiction to allow the player access to different fictional levels and, second, as the exceptional rupture by the part of some communicative entity.

4.5.2.-NATURALIZED METALEPSIS AND MEDIATED PERCEPTION: GAME INTERFACES AND TRANSFER BETWEEN FICTIONAL LEVELS

As previously seen with Gennette, metalepsis is understood as "any intrusion of the narrator or the extradiegetic receiver in the diegetic universe (or diegetic characters in the metadiegetic universe)" (1972, p.290). This idea of the rupture of frameworks implies a certain challenge for the ontological autonomy of fictional worlds and has provided a stylistic resource and exceptional yet very interesting narrative for traditional

mediums. The struggle for survival of Augusto Pérez, the protagonist of *Niebla* (Miguel de Unamuno, 1943), against his own creator is a great literary example, while in film we can see the comical incursions of the narrator of *Annie Hall* (Woody Allen, 1977) or the parody that emanates from the journey between different stories, from the "real" world of the child to the action movie he is watching, and vice versa, in *Last Action Hero* (John McTiernan, 1993).

Conversely, in video games, the rupture of the fictional framework is not something so extraordinary and punctual as in books or movies. Miguel de Aguilera (2004) has noted the player's ability to "travel across the screen" (p.7), accessing the proposed fictional framework and intervening in it. In this way, the video game transforms the traditional figure of the viewer into a new qualified figure, the "spect-actor," since the user experiences a new immersive way in which "he multitasks the practice of actor and spectator roles" (p.7).

The nature of video games determines necessary and constant action of the player in the ludofictional world so the game establishes a stable flow from the extradiegetic world to the constituent characters and elements of the gaming space. This is therefore metalepsis: the player performs a permanent act of possession over a character – which, as we saw, can reach different levels of fictional manifestation – and through his actions, modifies the narrative development of the video game, always from the rupture of the diegesis.

However, current academic research in Game Studies has defended the creation of new concepts instead of applying – with pertinent modifications – already verified theoretical frameworks. In this sense, and after the rejection of the concept of interactivity for its extreme ambiguity – as seen previously with Manovich (2001, p.56) and Ryan (2001, pp.16-17) – one of the most interesting proposals is the circular wall of Steven Conway (2010).

Conway sets forth the insufficiency of the concept of breaking the fourth wall for understanding the interactive possibilities between the player and the game world. According to the author, video games have the ability to expand and contract their "magical circle" or circular wall, the fictional boundary that separates the video game from the outside world, which was conceptualized for the first time by Johan Huizinga (1987) in his research on man and game, translated to the study of video games by Salen and Zimmerman (2003). Thus, the integration of the player himself or the extradiegetic spatial elements within the diegesis or, vice versa, the exclusion of the player's control in the heart of the fictional world to the outside world, would invalidate the possibility of metalepsis.

Some examples illustrate this theory. The video game *Evidence: The Last Ritual* (Lexis Numérique, 2006) makes use of email and predesigned web pages by the developers to drive the story. In this case and according to Conway, the circular wall ends up replacing the fourth wall right behind the player and integrating all those elements in diegesis.

Another example, this time of contracting the wall: in the video game *Sonic the Hedgehog* (Sega, 1991) we control a hedgehog through various platform levels. If we stop for some time, Sonic becomes annoyed with us and insists we keep playing until, tired, he abandons the screen and thus the game ends. In this case, the circle is contracted by "ejecting" the player.

Finally, in the case of *Metal Gear Solid* (Konami Computer, 1998), one of the team characters, Naomi Hunter, believes that the protagonist Solid Snake – controlled by the player – is stressed and suggests giving him a massage. Then, the game is directed at the player and asks that he place the game controller on his neck, which immediately vibrates and emulates massage sensations. In this case, it would not be a breaking of the fourth wall since it does not generate a sense of suspension of disbelief, but rather the circular wall is replaced.

However, Conway's approach suffers from certain problems and we must reclaim the concept of metalepsis for our study. The main objections are:

1.-The expansion of the circular wall in *Evidence: The Last Ritual* does not imply a rupture of the framework but rather a phenomenon of fictional transmedia or *cross-media* in which the construction of fictional space is made through the contribution of different mediums and platforms. Thus, the game world is not expanded behind the player but rather reclaims the presence of different texts in different mediums that complete this fictional world. As such, each text is independent but, at the same time, dependent on the creation of a greater ludofictional world, which recalls American series such as *Lost* (2004-2010) or *Heroes* (Tim Kring, 2006-2010), where the real web pages provide additional information about the fictional spaces. Therefore, the expansion of the circular wall does not only invalidate the application of the figure of metalepsis but also must be revised, taking into account the contributions of transmedia fiction.

2.- The contracting in *Sonic the Hedgehog* can be understood as a metalepsis of the protagonist character directed to the player character: Sonic, tired of the inactivity of the user, decides to take control of the video game and end the game.

3.- In the case of *Metal Gear Solid,* we believe a suspension of disbelief is created. The vibration of the controller is not intended for a common purpose, i.e. to respond to the actions taken by the player in the game world, but makes an atypical use of its property to break the fictional framework and create a revealing of the procedure.

The metaleptic ability created a spectacular technological fascination in the 70s with the arrival of new recreational machines. It seemed incredible that anybody could see their movements reflected through a controller in a virtual space. In the same way as movies, exposure time and public habit dispersed the initial enthusiasm of integrating these practices

into our daily routines. Today, technological fascination with devices has diminished, so the strange metalepsis of the player regarding the ludofictional world has been *naturalized*, or has lost its transgressor sense and its ability to suspend disbelief by making the procedure obvious. We can say that the video game is the first medium that is constructed in an essentially metaleptic way.

Therefore, we understand that the player's metalepsis of a ludofictional world, which we shall call *naturalized* metalepsis, is innate to the video game as a relation that constructs the ludic activity itself. We no longer consider metalepsis the exception, but rather a structural and inspirational element of the medium itself. The instrumentalization of metalepsis is generated through two different but linked processes: the physical control of the player and the point of view of the game – which we have already seen previously.

The physical control of the player assumes the kinesthetic and performative[12] manifestation of the act of play. The user must perform physical acts associated with a theatrical "as if" that drive relevant changes in the ludofictional world and represent the only medium of access open to the stable and permanent rupture of the limits of fiction. As such, the gaming controls have experienced a very important development associated with new forms of socialization[13] and have assumed, in recent decades, the advancement of an individual or locally shared game – the Atari joystick and the consoles from the 70s, the Nintendo controller and the pad from the 80s, the inclusion of more buttons and vibration starting in 2000 – and the emergence of social and online games. Today, new wireless haptic controls such as Nintendo's *Wiimote* Wii or Xbox 360's *Kinect* stand out for their

12. For a good analysis of the performative concept of video games, see Fernández Vara, 2009, p. 54 et seq.

13. Most works on the history of video games do not emphasize the importance of the physical game controls, but rather tend to focus on the study of the most popular games or companies (Kent, 2001; Donovan, 2010). For an exhaustive historical view of game controls, see http://www.videogameconsolelibrary.com/art-controller.html.

new configuration of metalepsis. With these new controls, the kinesthetic-performative action of a symbolic kind – for example, pressing a button that symbolizes the character jumping – gives way or appears to be combined with another explicit type. In games such as *Wii Sports* (Nintendo EAD, 2006), the game of tennis is no longer played seated on the sofa by pressing buttons and moving joysticks, but rather the movement of the arm with the racket must be emulated by the player in a precise way, similar to the dance game *Dance Central* (Harmonix Music Systems and MTV Music, 2010), where the user must mark the rhythmic movement by actually dancing in front of the camera. In this way, the new models of play make the boundaries between fiction and reality transparent and try to integrate the physical game space – the home living room – with the virtual game space. This model of game transparency is combined with the historic tradition of symbolic control but is adapted to certain types of explicit actions that we shall call composed controls. We refer to the mechanisms such as the *Zapper* gun, the main game medium for shooting ducks in *Duck Hunt* (Nintendo, 1984), the bazooka in *Super Scope* from Super Nintendo or the fishing rod in Sega Dreamcast. But without a doubt, the most successful symbolic-explicit control or composed control has been the electric guitar in different musical games of the sagas *Rock Band* (Harmonix Music Systems, 2007 – ?) and *Guitar Hero* (Harmonix Music Systems, 2005 – ?). Here the control has different colored buttons that emulate the different frets of the instrument, so the mediated action requires a previous learning of the control itself. It was not until *Rocksmith* (Ubisoft, 2012) that the control could be sustained by a true guitar, transforming the symbolic into the completely physical.

The physical game control, whether symbolic, explicit or a combination of both, is the main catalyst of sensations from the fictional world to the user through its intervention. Thus, we understand *metaleptic feedback*, the automatic and adjusted response of the fictional world to the player's action, which is part, among other elements, of the set of mediated perceptions

that make up the videoludic feedback loop. For example, if the player crashed his vehicle against an obstacle during the game, the system will send back metaleptic feedback as a vibration of the control. In any case, all feedback that belongs to the diegesis plane is understood as *naturalized*, while all that violates it remains outside of it.

Both naturalized metalepsis and its feedback are related to a system that is limited to communicating all kinds of information to the user through the game interface, a layer of action and perception located between diegesis and extradiegetic boundaries. Thus, the character's life counter, the duration of some effects, the available time or the score achieved until that moment are mediated perceptions that are modulated according to the double historic-cultural and creative process. In the first case, the evolution of the interface is linked to a cultural construction of the game, which traditionally has been confirmed by genre specialization, as in the case of the *High Score* in arcades, the HUD in tactical combat games, the minimap in exploration and strategy games, and the bar of verbs and inventory in the first graphic adventures. In other cases, the interface configuration has followed a creative trend that has led to the diegetic integration of several of its elements, such as the case of *Dead Space* (EA Redwood Shores, 2008), a terror game in which life and ammunition indicators are present, respectively, on the back of the suit and the gun itself.

Naturalized metalepsis is characterized, therefore, by the extradiegetic player's intervention in the world of diegesis through a system of physical controls – symbolic, explicit, or composed – and a game interface that receives, in return, metaleptic feedback, which can be manifested by the game interface – life reduction, increase in score – and/or by physical controls – vibration of the controller.

From the fictional perspective, it would still be possible to speak of transfer between different levels within the same possible world. The player accesses a game space but, sometimes, can

jump to a world inserted in the first one. Although these types of jumps are not used to holding ludic relevance – with the exception if they produce a modification of the game possibilities – they do have a level of fictional logic.

In these cases, the player accesses different levels with given fictional entities through naturalized metalepsis, generating ruptures in the form of Russian dolls. A good example of this type of approach is the game *Catherine* (Atlus Persona Team, 2011) in which different fictional levels are interspersed to combine the world of Vincent and his girlfriend Katherine with the world of dreams and nightmares. The creation of the nightmare world that Vincent suffers as a dream, which becomes a playable world only defined at a fictional level if we keep in mind the feared sub-world of the player character being developed. In other words, we are facing a story evoked by an intradiegetic narrator – Vincent – which is, at the same time, the game world.

It is important to remember that the model of ludofictional worlds does not deny the possible existence of narrators within the fictional framework, but rather it determines that the game is not constructed as a story with an extradiegetic narrator beyond it. In this way, every game is a fictional framework without being a story, and some of them provide expressively narrative entities that, within the framework, tell stories.

The system, as already mentioned, appears as a communicator entity in many ways: the point score, countdown or any other manifestation on the interface are clear marks of its presence. But, as such, the system does not tell stories. When it does, it is because an intradiegetic narrator – who is subject to the system controls – has been explicitly created for that purpose. Thus, *Monkey Island 2* begins with Guybrush telling Elain his recent adventures as a pirate and they take on, through *flashback*, a large part of the playable world. The great irony – and the demonstration of determinism that a narrator may contain – appears in the moment that Guybrush is about to die. If the

player does not do anything to save him, the narrator kills the character and returns to the same scene since he cannot die in his own memory.

Therefore, naturalized metalepsis as a transfer between different levels of the fiction also assumes, in the most cases, the momentary discovery of an intradiegetic narrator who dreams, remembers or fantasizes a given possible world.

4.5.3.- EXCEPTIONAL METALEPSIS. PARTICIPATING ENTITIES AND MAIN TYPES.

Regardless of how naturalized metalepsis is configured and, with it, ludic channels, video games also can contain ruptures of traditional frameworks, i.e. transgressors or *exceptional* metalepsis. In these cases, unlike naturalized metalepsis, an entity surprises the player, breaking fictional boundaries. This entity may be the system or another fictional entity (Figure 12).

Thus, exceptional metalepsis occurs when the system-narrator, or any other controlled authority of the system, and/or any fictional entities directly appeal to the player or to other game entities, thus skipping fictional levels.

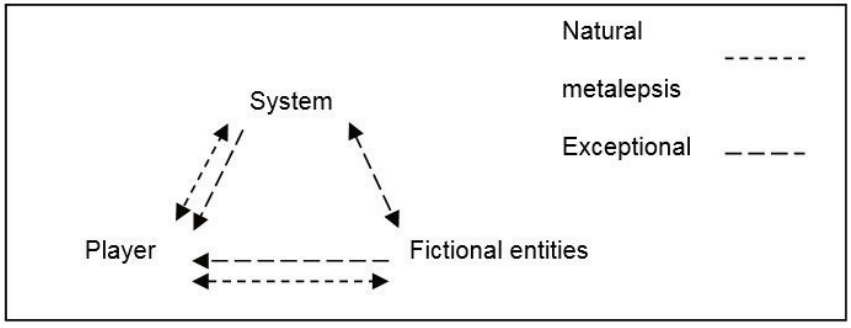


Figure 12. Metaleptic possibilities according to entities.

Several examples exist regarding the use of metalepsis to obtain comic effect. The narrator could be introduced into the possible world to strength the illusion of reality, such as the previously

cited *Monkey Island 2* in which a telephone booth is created to aid the player on a deserted island for an especially difficult level. Or the character may become self-aware, such as *Serious Sam 2* (Croteam, 2005), where the protagonist complains of the design of certain levels, or is happy to see a level with a sewage system, saying "every good action game needs a level with sewers!" Sometimes, a character also may make reference not just to a player but also the game interface, for example in *Simon the Sorcerer* (Adventure Soft, 1993) in which the player character, Simon, is talking to a group of elders and has the following conversation:

> "Simon: Hey, wizards.
> Wizard: What makes you think we're Wizards?
> Simon: When I move my mouse pointer over you, it says 'Wizards'"

In this way, Simon breaks the fiction but only to the space that makes up the interface, notwithstanding, of course, that this effect is translated beyond that scope, so that the player is aware of the breaking of the framework.

Therefore, and following the disposition of entities shown in Figure 12, the study of metaleptic ruptures within the ludofictional world is structured into the following categories.

Metalepsis of the System/Narrator towards the Player

The constructor of the fictional space directly faces the player and appeals to him. A good example would be the end of the video game based on *Matrix*, *Path of Neo* (Shiny Entertainment, 2005). Right when the player eliminates the last enemy, the screen goes blank. A white space shows two sofas and, seated on them, two pixelated figures, two rough avatars that are identified as the Wachowski Brothers – from the cinematographic trilogy, who also become narrators of the video game. The narrators congratulate the player for having won the game and propose an even greater challenge: eliminate a much more powerful and difficult enemy. Metalepsis allows the narrators to insert

themselves into the end of the game and challenge the player since they do not want the ludic joy to end, so they are shown informally extending it.

Metalepsis of the System/Narrator towards the Character

The narrator decides to make himself visible to the character by addressing him. The most famous case is *Max Payne* (2001). An offshoot of black film, the game shows the decline of a detective who has lost his family at the hands of a drug trafficker. The narrator, knowing the facts, decides to abandon his position to manifest himself and torment poor Max: "you're in a graphic novel," "you're in a video game," he says. The character, completely unnerved, starts to understand the existence of the interface itself, for example, or the statistics during the game. In this way, the narrator produces a bounce effect with metalepsis by which Max becomes, momentarily, self-aware of his condition.

Metalepsis of the Character towards the System/Narrator

The character demands the presence or action of the narrative entity or some element of the system. The best example is found at the end of the video game *Conker's Bad Fur Day* (Rareware, 2001). Conker, the game's hero, is about to die at the hands of a monster. Just when he is going to be devoured, the game stops… except for Conker. The character realizes that a testing error has been produced and he demands the presence of some of the programmers – who respond on screen through a common line – to agree to exchange his silence for weapons to help defeat the monster. In this case, the character breaks the fiction to demarcate a false error of the game programming and is the one in charge of demanding something from the system – in this case, identified as the programmers – who continue the ludofictional world.

Metalepsis of the Character towards the Player

The main character reacts to a type of player activity – or inaction – by addressing him directly. Such is the case of *Sonic* that Conway suggests, but also in *The Lost Vikings* (Blizzard Entertainment, 1992); although in this video game, metalepsis only arises if a player constantly fails when trying to surpass a level. Faced with repeated death, the protagonists say:

> "Eric: Not this level again!
>
> Baleog: Now look here, player, we're tired of this level. No more mistakes, okay!
>
> Olaf: Don't be so hard on the player, Baleog. Human beings are very sensitive."

Intertextual Metalepsis of Characters and Existing Entities

In this case, the rupture of the fictional framework is produced by the entry or exit of characters and/or objects in other fictional texts. This type of metalepsis has three main characteristics. First, it must effectively produce a rupture of the framework, not a simple "estrangement" effect (Shklovski, 2004). In other words, parodies, homages or gestures, by referring to other external texts do not produce a breaking of the fictional framework. Therefore it is necessary to clearly define the limits. Second, the transfer of characters and/or objects must be produced between two or more fictional and autonomous texts. And, third, it requires the cooperation of the player using previous knowledge put into a comic or surprising effect that produces the rupture, if the user recognizes the entity or object as a constituent element of another fictional world.

A very clear intertextual metalepsis appears with the interdimensional portal error in *Mundodisco II*: *Missing presumed...?!* (Perfect Entertainment, 1996) which leads the protagonist to the world of the saga's first game. Or also in *The Curse of Monkey Island* (LucasArts, 1997), the third part of the *Monkey Island* saga, when Guybrush sticks his head into a tree

hollow and momentarily appears in a forest from the first video game.

In the following section, we will present an example of how exceptional metalepsis and the study of fictional boundaries can collaborate in the creation of comedy through two classic examples of graphic adventures.

4.5.4.- EXAMPLE III. THE EMERGENCE OF HUMOR BY RUPTURING FICTIONAL FRAMEWORKS IN SPACE QUEST: THE SARIEN ENCOUNTER AND LEISURE SUIT LARRY: LOVE FOR SAIL!

In *Space Quest: The Sarien Encounter* (Sierra, 1986), Roger Wilco is part of the cleaning team of the scientific research ship Arcada, a stellar transport carrying a dangerous weapons called the Star Generator. After a long nap, Roger discovers that the ship has been invaded by an alien race called Sarien. The protagonist hero passes through several adventures in his attempt to sneak onto the Sarien flagship using the Star Generator. One of the most notable characteristics of this game is the great number of ways to die that the protagonist faces. It is precisely in this very dangerous environment where video game metalepsis appears with an essentially humorous function. The first transgression is done by a narrator pair, self-described as *The Guys from Andromeda*. While most of Roger's deaths are shown as simple events that lead to a frustrated end, the most ridiculous or predicable ones trigger the – ironic – anger of the narrators, who proceed to jump boundaries to scold the clumsy protagonist. Thus, if Roger dies in a duel with an alien because he misses the shot, the narrators say:

> "Geez Roger! Go take some marksmanship courses and come back and give it another try in a couple of mounths. OK?"

Or at the end of the game, when Roger does not manage to climb aboard the spaceship that will save him because he falls into a space hole. The narrators shout at him:

> "Gee whiz, Roger! You could actually be a hero if you weren't so clumsy. Wise Up"

The second framework rupture, as its main motive, involves one of the most obvious deaths Roger can suffer, and a cruel and great mockery by the narrators. At some point, the protagonist sees a pool full of corrosive and lethal acid, and if he imprudently touches the liquid substance, he dies instantly. So, a small window appears in the upper right corner personifying *Two Guys from Andromeda.* The bewilderment of such an obvious death leads the narrators to manifest themselves and analyze what has happened. They converse between themselves and detail the errors committed by Roger as follows:

> "'Well, Scott, it looks like Roger has done it again.'
>
> 'It sure does, Mark. Let's run that one again with the aid of our new How-He-Blew-It Cam™ and Chalkboard ™'"

A poster with bright and flashing letters reading "Instant Replay!!" appears. Then the death of Roger is rewound until the moment he touches the acid and the point of contact is marked with white chalk as a circle and an arrow. The analysis of the narrators continues:

> " — Now, this is where Roger makes the fatal move.
>
> — And we all can see the result of that mistake.
>
> — I don't know about you, Scott. Personally, I like to know exactly what I'm messing with before I actually mess with it. I guess he'll know better next time. Ouch"

The third great recorded transgression also comes from the narrators, but this time the target of their anger is the player himself. In this way, at the end of the game and after Roger's previous mistake, the narrators scold the player's bad playing as follows.

> ""Thank you for playing Space Quest. Too bad you've failed miserably and doomed all your people to a horrible death at the hands of the Sariens. If you continue playing as skillfully as this, we'll never have a chance for a sequel. Better luck next time"

The last rupture of the game is produced when Roger goes to start the spaceship and presses the button labelled "Don't Touch" The ship takes off and crashes on a faraway planet, killing the character. This does not constitute a rupture, because this planet belongs to another fictional universe, a video game by the same company called *King's Quest I: Quest for the Crown* (Sierra, 1984). Specifically, Roger dies in the protagonist's castle moat and after the impact the following comic conversations occurs:

> "—Ken? Did you hear something?
>
> — It was probably just the gators entertaining another Space Quest player. Go back to sleep, 'berta.
>
> — Through a strange quirk of fate (or was it?) you have stumbled into a place beyond time, space and dimension. You have entered — The Daventry Zone!! That's right, the land of King's Quest. This will not help you now since you are playing Space Quest."

As we can see, the narrators connect this seemingly new scene by considering the possibility that some players do not recognize it as their game *King's Quest*.

But without a doubt, it is within *Leisure Suit Larry: Love for Sail!* (Sierra Online, 1996) where metaleptic relations practically consist of the entire axis of the game's comic content. In this video game, Larry Laffer, forty-year-old playboy, gets a pass to spend his vacation on a very upscale cruise. On board, a tournament is organized, with the prize of a week's paid expenses in the spectacular Captain Thygh's cabin. To win, the participants must get the maximum score in a set of different tests throughout the boat.

One of the most interesting characteristics of this adventure is Larry's intensive use of extensive metalepsis towards the

narrator. In this case, a description or comment from the narrator makes Larry jump with curiosity to get more information or simply under the pretense of being funny. To do so, Larry directly addresses him, questions him and even is capable of maintaining more or less long dialogues during the rupture.

In other cases, Larry uses dialogue with the narrator to get more information. For example, when Larry enters his hotel room for the first time, the player can consult the descriptions of objects found there. The room is, in fact, the engine room. If the player observes the shower, the following metaleptic dialogue occurs:

> "– *(narrator)* This Lil'Giant Safety Shower was built according to the traditional principles of design and workmanship of the master craftsmen of Vrohuti.
>
> — *(Larry)* Well, that's good.
>
> — *(narrador)* Not that good. Their traditional principle is: "Make it last until the warranty expires."
>
> — *(Larry)* Doh! Oh, wait: when will that be?
>
> — *(narrador)* Give or take a week?
>
> — *(Larry)* Sure.
>
> — *(narrador)* 'Bout twelve years ago.
>
> — *(Larry)* Doh!"

Another type of metalepsis is that which drives Larry to directly address the player. Thus, when getting on the boat and meeting the curvaceous captain, Larry looks at the player and says:

> "– *(Larry)* Before this cruise is over, she'll be fallin' all over me!"

Finally, a second group of very interesting metalepsis relates the narrator to the player. In this case, the narrator denies the player access to a certain part of the game for intertextual reasons:

> "*(narrator)* Those decks are reserved for 'Leisure Suit Larry 8: Lust in Space!' Don't try going there THIS game."

The last metalepsis of the narrator towards the player involves the interface between the interface and diegesis. If the player decides to give the order "Use Larry," the narrator will break the framework to respond:

> "– *(narrator)* You know what? The main goal of this game is that you don't have to do THAT. "

In conclusion, while in *Space Quest: The Sarien Encounter* a large part of the humor is divided between the critique of a clumsy character and a player who dies repeatedly, *Leisure Suit Larry: Love for Sail!* is focused on the acidic irony that a joking narrator provides a protagonist who never achieves his objectives. Thus, the extraordinary metalepsis between entities and in relation to the player do not appear as mere gags but rather completely configure the way of transfer between different possible worlds.

PART III

LUDOFICTIONAL WORLDS IN VIDEO GAME GENRES

Chapter 5

CASE ANALYSIS

"Sometimes I do stupid stuff, and I don't even know why. As if my body were being controlled by some demented, sadistic puppet master." — Bernard, Day of the Tentacle

5.1.- PORTAL 2 (VALVE CORPORATION, 2011)

5.1.1.- SCIENCE, TECHNOLOGY AND HUMANITY

Portal (Valve Corporation, 2007) was one of the most innovative offerings of its time, which rediscovered the possibilities of first-person action games by using a hybridization of object placement logic puzzles. Unlike the classic model of annihilating enemies with the use of multiple weapons, *Portal* sets forth a more focused emphasis on the decision to use riddles, in which action is understood as violence and aggression. The game system – a model of portals that we shall see later on – along with a focused dialectic in response to what is human and what is machine, led Valve to expand this ludofictional world with an essential sequel: *Portal 2* (2011).

In both titles, Chell, a young woman of unknown origins, wakes up in the scientific facilities of Aperture Science, a hidden complex of experimentation several kilometers underground and completely isolated from the outside world. While in the first title, Chell must overcome different tests and survive the psychotic GlaDOS – an advanced AI robot that supervises experiments – in the sequel, her escape is set between two main

conflicts. On one hand, the struggle for power between GLaDOS and Wheatley – a robot with a core masculine personality – and on the other hand, the discovery of the heroine's past and the clash between human emotions and the logical thinking of machines.

5.1.2.- POSSIBLE WORLDS AS PUZZLES

The world framework in *Portal 2* manifests as an absolute linearity by connecting each Primary Possible World consecutively. Additionally, it lacks Secondary Possible Worlds and stories are not configured in Narrative Possible Worlds, but rather are inserted naturally into the Primary Possible Worlds without ever distorting the player's ludic ability. In this way, the single Narrative Possible World appears at the end of the game since it entails the dramatic ending of the adventure.

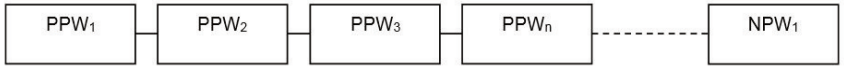


Figure 13. World framework in Portal 2.

This robustness and determinism in the macrostructural dimension is explained by the element of logical play in each one of the Primary Possible Worlds. Thus, from this perspective, each one of these worlds can be isolated since the underlying challenge is completely autonomous from the general structure. These worlds consist of rooms with a given entrance and exit, without the possibility of going back, and with basic elements of puzzle design that configure the true challenge. Conversely, the lack of Narrative Possible Worlds evokes a dynamism that sustains the game perspective as action, in this case as escaping the constant assassination attempts that the heroine faces.

5.1.3.- THE EGOISM OF POWER AND THE REVEALING OF LOVE

The ludofictional world in *Portal 2* consists of a vast, abandoned underground laboratory. Except for GLaDOS and Wheatley, the facilities, once populated by scientists and subjects put through

all kinds of experiments, now appear deserted, with the only exception of the turrets, small robots that do not hesitate to use their lasers against the heroine. It is a minimally multi-person world in which the constellation of agents includes both the previously mentioned entities and the scene itself as a character, in which the model of repressive power is constantly questioned: sometimes exercised by an agent, other times given to another.

The game evolves from the relationships between the triad of main entities: Chell, Wheatley and GLaDOS.

As we have already mentioned, Chell is the player character. Neither the player nor Chell herself know the character's origin or her connection to the laboratory where she wakes up. What is more, her voice is never heard and her body never seen, except for a reflection effect. Therefore, the heroine is manifested, at the start, as a level 0 character also in keeping with the first-person point of view of HUDs. However, similar to what occurs with Gordon Freeman in *Half-Life 2*, the character's fictional baggage increases with time and continues configuring it as a character-portrait or even an autonomous character, thus demonstrating that it is possible to create charismatic characters without the use of great narrative resources such as dialogue or closed levels. In accordance with this evolution, the player character's sub-worlds are not known, but, through fictional revealing, the game fosters the user's interest of knowing more of her past. In this way, even if it seems that the effective real sub-world is clearly determined by the sub-world of ignorance, the gaming experience drives the player to keep overcoming the lack of information.

Chell's relationship with the other agents involves great asymmetry. From the moment she obtains the device that opens portals, the heroine discovers that she does not have any weapon against the turrets and the complex's defense system. At some levels, it is impossible to advance by destructive action precisely because of this extreme asymmetry that only can be overcome by the inventiveness of the gaming system. And, in this sense, the configuration of the environment as autonomous puzzles

implies a great effect of transitivity in all the player character's actions: there are no attributes or skill levels that can be improved, only a scenario susceptible to being modified for advancing to the next possible world.

Wheatley provides a comic dose for the ludofictional world through the embodiment of a masculine personality module of profound awkwardness and uselessness. His disastrous acts contrast with his kindness and initial interest in helping Chell escape the complex. His role as a guide is only tarnished after he defeats GLaDOS by snatching its power and expelling it into a potato battery – a tuber connected to a minicomputer that provides it energy. If until that moment, it had been GLaDOS who had held the repressive power to eliminate Chell, now Wheatley loses his head. Instead of saving the heroine, he sends her into the depths of the laboratory. From this moment, a very interesting double discourse is generated that can be defined as the egoism of power – Wheatley – and the revealing of love – GLaDOS and Chell.

Wheatley, subject to the computer system's dictates that he just obtained, feels the constant need to create better scientific tests than GLaDOS created in its time. This aggrandizement of the desired sub-world is tinged by technological vanity over all things organic, the concept of the machine as the single definitive truth in human evolution. But, in turn, his origins as a personality module – and, therefore, with human traits – make Wheatley an especially imperfect and potentially destructive being. His ineptitude is a clear case of power in the wrong hands, or the use of technology without ethical purposes, the main manifestations being the destruction of most laboratory rooms and the accidental nuclear fusion of Aperture Science's main reactor.

While Wheatley manages to destroy the complex unintentionally, Chell and GLaDOS establish new relationships. In this case, the old, cold and calculating AI that had tried to finish off the protagonist is now her main ally for taking away

Wheatley's absolute power. The most profound levels of the laboratory show the origins of the project and the different types of experiments done there. Through the transfer between worlds, Chell discovers, little by little, that Cave Johnson, the founder of Aperture Science, died from a strange illness before discovering artificial intelligence where he could store his mind and the mind of his secretary, Caroline, who would be incorporated into this system years later.

It is very interesting to see how Chell's known sub-world is nourished by different present elements in the scenario, particularly through two resources. First, the scenographic distribution of objects in the hallways shows, among other things, life in the laboratory during the 70s, the relationships between employees or the pictures and evolution of Cave Johnson's illness. And, second, a set of recordings scattered in different possible worlds configures the story of life and death of the company's president by emulating the technique that has been previously seen in games such as *Bioshock,* which lets the fiction expand without sacrificing the ludic experience.

While Chell's known sub-world is being completed, GLaDOS recovers memory space, in this case, existing but forgotten. In the same way as *Memento,* GLaDOS needs fictional elements and stories that make up the known sub-world of the heroine to restore it. It is thus a joint path towards the emergence of knowledge, whether new or recovered.

The end of *Portal 2* entails Wheatley's exile to the Moon – through a portal Chell creates – and GLaDOS' doubts. Artificial intelligence here consists of the struggle between the empirical rationalism of the computer mind that wants to finish off the heroine and the maternal love, the human emotion that Caroline feels towards – surprise – her daughter Chell. In this struggle of desired sub-worlds, between life and death, machine and human, the heroine is finally freed to the outside world through a Narrative Possible World that configures one of the most brilliant endings in the history of video games.

5.1.4.- METALEPSIS AS AUTONOMOUS PLAY

Portal 2 is, above all, a game in which the physical relationship and constructive-destructive type actions are placed at the center of the ludic experience itself. Using a minimalist interface that only shows the portal device cursor, metalepsis is naturalized by learning the gaming system mechanics. Basically, the device allows the opening of two portals of different colors on flat surfaces, which are connected to each other so the respective portal can be closed if we open a new portal of the same color. If the player character or any other fictional entity, object, or laser crosses one of them, it appears coming out of the second, regardless of its distance and location . These apparently simple mechanics allow a rich and imaginative game by subjecting the transfer between portals to the laws of physics: the objects thrown acquire speed if they exit through a tall portal, while the player character can manage to climb walls by opening and closing new portals.

The portal mechanism makes sense in the autonomy of each one of the possible worlds that make up this ludofictional system. In other words, each world is identified with a closed room – a particular experiment – that must be successfully completed through the necessary combination of certain elements and objects. The player character's actions become completely transitive by fulfilling, as a basic function, the transformation of the scenario for the purpose of the goal. Additionally, the necessary actions – in relation to the purpose of the possible world specifically – are completely fixed: only a specific combination of actions solves the puzzle and opens the door to the next laboratory room.

The complexity of puzzle increases as the worlds are overcome with the appearance of new elements to combine. The simplest action implies the player character's passage through the portal and some objects, generally large cubes. This can allow the opening of a door by placing them on top of a switch, or destroying a turret by creating one portal underneath the object

and one above the enemy. But in more advanced levels, other more interesting possibilities are added. Besides the excursion funnel – a kinetic ray that transfers the character along a route – and the aerial faith plate – a catapult made of tiles – the elements that best strengthen the metaleptic combination are the blue, orange and white gels. The blue repulsion gel allows high jumps and the rebound of elements coated by it, while the orange propulsion gel increases the speed of fictional entities that walk above it. Besides that, the white gels allows the opening of portals in those surfaces that have been stained, thus expanding the game possibilities.

Therefore, *Portal 2* sets forth two types of very different journeys. First the set of logic minigames through a new gaming mechanism that entails, in turn, its naturalization in the first game levels. And, second, an adventure towards the knowledge of fictional entities focused on the endless and fascinating debate between the pragmatics of reason and the sentiments of the heart.

5.2.- ALICE MADNESS RETURNS (SPICY HORSE, 2011)

5.2.1.- WONDERLAND AS TRANSMEDIA FICTION

From the publication at the end of the 19th century of *Alice's Adventures in Wonderland* (1865) and its sequel *Through the Looking-Glass* (1871), the surrealist and satirical world created by Lewis Carroll has been the object of multiple adaptations to different mediums. In this sense, the transmedia fiction has been nourished by movie adaptations, from the first work by Hepworth and Stow (1903) or the Disney animated version (1951) until the most recent movie by Burton (2010), and the video games *American McGee's Alice* (Rogue Entertainment, 2000) and *Alice Madness Returns* (Spicy Horse, 2011).

The two video games directed by designer American McGee break from the canon, the literary work, to construct a new, much darker, demented and violent universe. Thus, the most

relevant fictional entities are transferred – Alicia, the Cheshire cat, the White Rabbit and the Queen of Heart – to a new world that could be considered a sequel of *Through the Looking-Glass*, which indeed configures a very different universe.

Alice Madness Returns, the second installment of this new world, shows an unhinged Alice who has managed to leave the madhouse where she was admitted after the death of her parents and her sister in a domestic fire. Now Alice lives in London under the care of Dr. Bumby, a famous psychiatrist who insists of letting go of all possible memory of her past and the tragedy. However, she persists in her quest to discover the true culprit of the death of her family while she tries to save a dying and run-down Wonderland which is threatened by the return of the Queen of Hearts and the mysterious Infernal Train.

5.2.2.- THE STRUCTURE OF WORLDS: BETWEEN THE REAL AND THE IMAGINED

The framework of worlds that is posed in McGree's sequel is configured in absolute linearity with the unique alternation between the playable Primary Possible Worlds (PPWs) and the Narrative Possible Worlds (NPWs). Thus, the game moves "forward" and the fictional boundaries avoid returning to previous levels.

However, the gaming experience in relation to this framework is not perceived from simple linearity but rather configures a specific fictional perception: the worlds are connected by two fictional levels that obey, in a strict sense, the effective real sub-world and Alice's imagined-feared sub-world.

In this logic, the cutscene NPWs – whether with animated video or images of the game engine – fulfill two fundamental roles. First, they serve the mechanism of transfer between different PPWs of the imagined sub-world by enabling Alice's movement from one game space to another and adding new information about the heroine's main conflict. Second, they connect two

fictional levels, the real and the imagined, by allowing coherent transitions. In contrast, the *ingame* NPWs allow both the presentation of the most important enemies and the introduction of different memories that Alice keeps recovering, which never interfere with or suspend the ludic experience

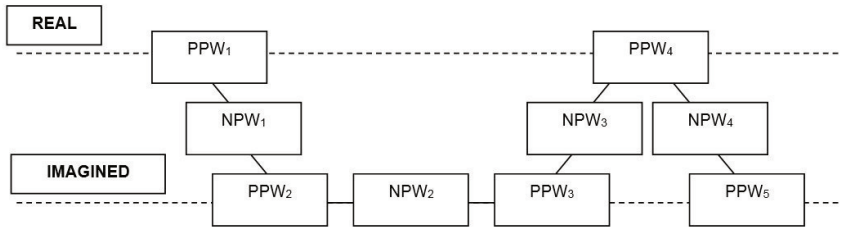


Figure 14. Framework of worlds in Alice Madness Returns

5.2.3.- FICTIONAL ENTITIES AND THE CONFIGURATION OF MADNESS

At the microstructural level, *Alice Madness Returns* combines basic fundamental elements for the two previously presented levels, the real and the imagined. Thus, the point of view is common and essentially configured in third person or by virtual journey, since it is the one that best adapts to the platform gaming model in three dimensions and to strategic attack. In any case, it is also possible to use a first-person point of view for certain situations[1]. Another fundamental element is temporality, which here does not play any specific role, except for certain puzzles in the first PPWs. However, the true ludofictional potential of the game appears with the differences between levels.

The real level shows a grey world, a dirty and run-down post-industrial London with poor and unkempt areas where crime and prostitution abound. In this context, the constellation of agents is configured in a more physical than dialectic multi-person world, and more repressive than cooperative, and whose progression will be essentially constructive. Alice, as the player character, is a scared and helpless girl, insecure and incapable

1. In a few levels, a radical transformation in point of view and space is produced, changing from free 3D to 2D with a lateral scroll.

of anything. Thus, her main possible actions are reduced to movement and, on occasion, speaking with some specific entity, but nothing more. In this sense, her actions are asymmetrical in relation to the rest of the agents, since they may pose a threat to the protagonist, though rarely.

This level is marked by Alice's effective real sub-world and, especially, by a sub-world of very incomplete knowledge. She does not know what has happened with her family or the role child prostitution plays in everything she remembers. Thus, the real level is the world of overcoming ignorance and the recovery of a mind, as Alice says "that is still in pieces." The main agents here are Nany, Alice's old nanny, who now runs a brothel, the greedy lawyer and, above all, Doctor Bumby, the pedantic and condescending psychiatrist of dark intentions.

If the real level is the quest for truth from the helplessness of the player character, the imagined is just the opposite. Here, Wonderland is mainly a set of dreamlike and terrifying spaces – a mixture of *steam punk* and gothic style – very different from one another, from a huge doll house to a Japanese painting, including aquatic contexts and, as is traditional, the castle of the Queen of Hearts and her legion of card soldiers. Everything once dreamed by Alice is now a victim of her trauma and missing memories: the perversion easily stands out and the fictional agents of this world are abnormal enemies derived from the technology of the rational mind – parts of machines, petroleum – and a sad childhood that is manifested by amputated limbs and doll heads without eyes. But even the main allies of the player character cannot escape this amnesic and strange transformation. Thus, the Mad Hatter appears dismembered and demented while the White Rabbit – with little presence in the game – loses his eyes and ck ws up his head. The only sane one – though, mysterious as always – is the Cheshire Cat, Alice's guide, who provides the main clues to overcome the most complex challenges.

The dreamed world involves the remedy to the known sub-world to the extreme as related to the real level, especially if we

keep in mind that this multi-person space is much more physical and repressive. The destructive-constructive logic, through which the heroine can improve her weaponry and lives to face new enemies, justifies that Alice is a strong character, sure of herself and brave. She has different weapons that she progressively obtains – the Vorpal sword, the wooden horse, the pepper grinder and the teapot – different dresses associated with the game, and a set of always possible actions, such as the double jump, levitating into the air or becoming small. In this way, and in relation to her enemies, Alice begins to improve in combat strength and mobility, so the asymmetry provides a fairly easy game. Additionally, the game interface is extremely minimalist in order to expand the player's available view, since it only consists of a tooth indicator – a basic element to improve weapons – a life counter in the form of rose petals and a pepper grinder control.

The last distinctive feature of the dreamed world is the search for memories throughout each one of the scenarios. As if it were a brain, Alice must look into every nook until she finds short stories that, all together, reveal the truth about the death of her family and the role that her sister Lizzie and Doctor Bumby play in this event.

5.2.4.- THE DOUBLE LEVEL OF FICTION AND PLAY

In the beginning, the game seems to prioritize the real world over the dreamed world by linking most of the first to explanations about Alice's motivation and the other agents. However, as we advance, the relationships are inverted to give greater prominence to the imagined world. Here, the metaleptic incursion is much richer than in reality, and each one of these dreamlike phases shows a design of spaces, final enemies and a system of much more difficult puzzles. Also, the dreamed world starts to give a dramatic balance towards discovering that, in reality, the Queen of Hearts we are pursuing is not an enemy but Lizzie, Alice's sister. The encounter with Lizzie serves to make the protagonist see that she had no fault in the death of her family; instead, it was the fault of the mysterious being that

drives the Infernal Train, a fearsome machine that destroys Wonderland, as Nothing did in the case of *The Neverending Story* (Michael Ende, 1979). Here, the feared world that had powerfully determined the imagined world starts to lose strength since the heroine's guilt disappears and a new enemy emerges to direct the game action: Doctor Bumby, pedophile and pimp, who saw Lizzie as a rebellious girl who he had to murder after raping her.

At the end of the game, a few hybridizations are produced that demonstrate that, from Alice's perspective, there is not much difference between the real world and the imagined world. Even if the enemies and main allies never pass the boundaries between levels, certain ghosts do into the plane of reality. And the peak of the hybridization appears with the defeat of the final enemy in both planes: in the imagined, after the death of the Doll Maker – the *alter ego* of Doctor Bumby and the driver of the Infernal Train – and, in the real world, by shoving the psychiatrist onto the train tracks.

Therefore, *Alice Madness Returns* sets forth a platform and action game, its main asset being a playable world that is completely determined, on one hand, by an effective real sub-world that denies knowledge of reality to Alice and, on the other hand, an imagined sub-world in connection with the feared sub-world, which justifies the appearance of the most horrendous nightmares.

5.3.- RESONANCE (XII GAMES, 2012)

5.3.1.- THE RESURGENCE OF A LOST GENRE

From the late 90s, the graphic adventure gave its siren call as a hegemonic genre. The establishment of the *cd rom*, graphic cards and 3D graphics, along with a change in player preferences towards action games such as *Doom* relegated the most cinematographic genre of all to a secondary position, both at the production and consumption levels.

However, the supposed death of the genre in contemporary gaming was not as such. Offerings such as *Runaway: A Road Adventure* (Pendulo Studios, 2001), *Syberia* (Microïds, 2002), *Machinarium* (Amanita Design, 2009) or *Deponia* (Daedalic Entertainment, 2012) has demonstrated that there is a small but creative industry that continues to bet on quality graphic adventures and the loyalty of an important niche market.

In this context, *Resonance* combines current production and distribution elements with past knowledge. Today the internet allows a much more flexible model of independent game creation and *Resonance* is good proof of this, since it first obtained much of its funding through the crowdfunding platform *Kickstarter*[2] and second, it used standardized tools accessible on the internet – in this case, the program *Adventure Game Studio* – along with a small, geographically delocalized team.

However, far from technical showing-off, these contemporary forms of creation have served to recover a certain sentiment of nostalgia regarding the graphic adventures that *Sierra Online* and *LucasArts* made in the 90s. With large pixel graphics – today associated with so-call *pixel art* – and conventional mechanisms of the genre, *Resonance* takes its classic essence as a starting point for weaving a fictional world and a set of histories that involve the determinism of the past, memories, ethics and betrayal. Thus, the strange death of Doctor Morales – a scientist researching revolutionary and dangerous technology – ends up joining Ed, a brilliant mathematician who helped the dead man with his work, with Anna, a doctor and family member of Doctor Morales, Detective Bennet and a nosy blogger called Ray. All of them

2. The crowdfunding model is based on the collective funding of a specific project where each contributor invests what he considers appropriate and, in return, receives different gifts. In the field of video games, its success has been massive, as the Kickstart platform and its extensive funding of all kinds of genres shows. In fact, the freedom of the user to invest in those offerings that most intrigue him, have demonstrated once more that the genre of graphic adventures continues to fascinate and has the support of many players.

will be involved in a great conspiracy for the control of a very powerful technology.

5.3.2.- FROM THE MODULAR TO THE STRUCTURE OF LOCATIONS

One of the structural characteristics of *Resonance* is its adaptation to the fictional intensions that underlie each game phase. At the start, the game shows four portraits of the main protagonists that correspond to the four primary possible worlds. The objective of these primary worlds is to present the characters and weave, little by little, the bonds that will end up relating them to each other. This type of presentation of fictional entities is clearly influenced by the choral works of the modular narrative such as *21 Grams* (Alejandro González Iñárritu, 2003) or *Magnolia* (Paul Thomas Anderson, 1999) in which the tracking of each character is the way to understand the relationships between each one of them.

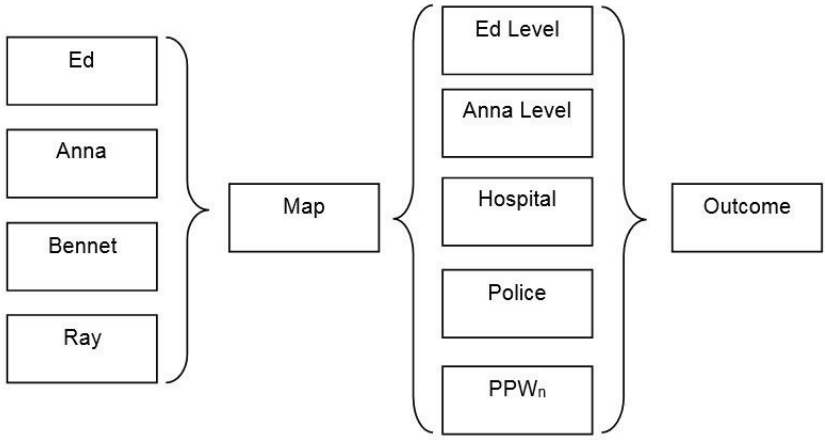


Figure 15. Framework of worlds in Resonance.

The multitude of player characters – a characteristic that appeared in the genre with *Maniac Mansion* (LucasFilms Games, 1987) and *Maniac Mansion 2: Day of the Tentacle* (LucasArts, 1993) – entails, at the structural level, a clear manifestation of the important of the indexical term in games. In this initial phase, each primary possible world only can be related to a character

and his/her experiences, while in previous phases, the worlds associate the entities according to their unique abilities and social positions. In this way, the indexical term – understood here as the relative position in a specific world, variable according to the change in focus – always operates, whether to present a character or to relate to the specific world with the abilities of a certain fictional entity.

The second structural phase presents the group of characters and enables, through a map, the movement of the fictional entities – only one entity, pairs or the entire group – by different locations of the primary possible worlds. All of them must be visited notwithstanding the order to follow and, in some cases, the inclusion of mini-puzzles within them – such as the cracking of a computer or using different levers to move the equipment from side-to-side on the scene – makes the purpose of each one of the worlds more complex. In contrast, the last game phase shows a more severe linearity to approach two possible dramatic balances.

From the perspective of narrative possible worlds, *Resonance* uses the resource of genres to alternate action and non-playable display as a consequence. For example, the action "opening doors" implies the momentary suspension of the game to show how the character does so. However, the true narrative possible worlds appear either by concluding important dialogues or as links between worlds, the latter not too common.

5.3.3.- PUZZLES, MOTIVATIONS AND MEMORIES

Resonance sets forth a multi-person, dialectic and occasionally physical world in which the character can die. Cooperation and team work are key for the formation of atypical characters, where changes in focus and interrelated necessary actions are the ludic manifestation of tremendously relevant motivations.

In fact, the configuration of the characters as autonomous – and, to a lesser extent, thanks to the vertical scroll and the third

person – contribute to the understanding that we are not dealing with a game that seeks identification with the player, but rather an approach that aims to construct and respect the character motivations as the ludofictional world's basic axis. Thus, the peak of motivational autonomy and the rupture of the possible identification is produced by Ed's pivot from hero to villain after murdering Anna in cold blood and, in turn, through the elimination of suspicions about Detective Bennet. *Resonance* thus consists of a constructive game that comes to replace the sub-world of knowledge for all characters. The intension of the known sub-world reveals the true motivational structure of each one of them and allows, in the end, the great turns in relationships between the fictional entities and the emergence of drama.

Transitive and necessary actions that drive the game are focused on the relationships between characters and their social and labor statuses. Thus, to be able to access certain areas of the hospital, we need Anna's pass, while the contacts in the city's slums only will trust personal relationships they have with Ray and Detective Bennet.

Together, actions, notes, objects, new technologies – mobile phones, computers – and dialogue has a key role both in the game and the suspicions that may be produced regarding the relationships among the entities.

We distrust Bennet for a note that falls to the floor, and we can expose one of the main villains of the game thanks to a photograph of a robbery.

But without a doubt, the game mechanism with the most success interrelating the fictional construction of the characters with possible and/or necessary actions is the role of short and long term memories. Short-term memories are associated with specific characters and allow the recovery of up to ten entities, objects or scenes used in given conversations or in combination with other elements. In contrast, long-term memories are not

necessary limited to characters but rather may be used for any member of the group. This type of memory ranges from unforgettable personal memories – Anna's childhood trauma, for example – to significant shared events by several characters which may return to the present – for example, the power outage of the city lights or the transcendental conversation between Ed and Ann in the hospital after the death of Morales. The use of memories as a game element enhances the value of the vital experience of the entities and shows how the characters are not only what they do now, but what they have done and lived until then.

5.3.4.- MIMETIC METALEPSIS AND FICTIONAL LEVELS

Naturalized metalepsis follows conventions of graphic adventures and is channeled through the two buttons on the mouse. Overtaking the menus with verbs from the *SCUMM* system devised by *LucasArts*, the subsequent adventures synthesize the actions with the cursor icon and enable metalepsis. In *Resonance*, this metaleptic simplification translates to mere observation with the right button and the most appropriate actions are automated with the left button.

On the other hand, on certain occasions, metalepsis is not instrumentalized by genre conventions but rather by a mimetic emulation of the actions in question. For example, during an important moment at the start of the game, Anna flees from a murderer. She escapes through the window of her room, climbs the fire escape and finds the exit door closed. While the murderer goes up to reach her, Anna must cut a cord to destroy the last flight of stairs. The action of cutting the cord with a piece of glass is not automated with the left button, but rather becomes a detailed necessary transitive action, so the player must be exact by moving the button above and below while the glass tears the cord. This emulation not only brings real action to its mediated reflection but also essentially contributes to the dramatic tension produced by the pursuit.

The last relevant metaleptic manifestation consists of the transfer between the main fictional levels to Anna's dreamed sub-world. Both in the primary possible world and in others later on, Anna lives the childhood trauma of losing her mother and the alcoholism of her father while different nightmares occur in which she is chased by a monster. Here the temporal issue is important since her fleeing is timed, so a mistake in the performance of the actions – locking the door with a key, looking for a way to open the ventilation duct… may entail the protagonist's death. Once this level is overcome, the game mode changes to a bird's eye perspective in which girl Anna flees through the ventilation duct of her house and finds herself, in turn, within different memories. This connection between the dreamed sub-world – made up of the feared sub-world – with the remembered sub-world does not consist of a secondary possible world since the memory of past moments will be decisive for the development of the game.

Therefore, *Resonance* emphasizes the gaming experience through actions based on dialogue and the recovery of memory, while the fictional world is woven, essentially, with the understanding of different motivations – and at same time, contradictory ones – of each one of the player characters that configure the constellation of fictional entities.

5.4.- ALAN WAKE (REMEDY ENTERTAINMENT, 2010)

5.4.1.- THE EMERGENCE OF RURAL TERROR AS PSYCHOLOGICAL THRILLER

Within the hybrid genre between action and adventure, terror has managed to create its own space. The most popular titles influence the appearance of the zombie threat and the struggle for survival in the subgenre called *survival horror* – such as the saga *Resident Evil* or the less adventurous *Left 4 Dead* (Valve Software, 2008) – while spatial fear and the bloodiest action is best found in *Dead Space*. In contrast, other titles such as those present in the saga *Silent Hill* (Konami, 1999-?) have sought a

more psychological terror, focused on the configuration of evolutionary fictional worlds in the physical and direct confrontation with the fantastic. It is precisely in this last group that *Alan Wake* is framed, a mix of psychological thriller and survival horror in the framework of rural terror.

The game story starts in the middle of the 70s when Thomas Zane, a famous poet and writer of fantastical stories, goes with his wife Barbara Jagger to the idyllic Bright Falls, an American mountain village surrounded by forests and lakes. There he finds inspiration in his recently acquired cabin located on the shores of Cauldron Lake.

However, with the passing of the years, he discovers that the lake harbors some type of perverse power that makes his fantastical stories real, so he decides to stop writing. Right at that moment, Barbara drowns in strange circumstances and Zane, in complete despair, decides to write the return of his wife. But what emerges from the waters is not his love, but a supernatural being that has possessed Barbara and intends to spread darkness throughout the world. Zane, incapable of defeating the monster he has freed, writes a few last pages in which, years later, a writer in creative crisis who is afraid of the dark, called Alan Wake, will arrive at Bright Hills to face the supernatural enemy. Together with his wife Alice, Alan looks for refuge in this little town to write new books and find inspiration, until his beloved disappears in strange circumstances into the depths of Cauldron Lake.

In this way, *Alan Wake* proposes to the player the search and release of Alice while the so-called Dark Presence and its possible destruction are explained. To do so, the game configures the ludofictional world from the confusion and determinism of the diegetic model, the psychology of the characters and the use of light and darkness as the hero's only way of survival.

5.4.2.- THE VIDEO GAME AS AN EPISODIC STRUCTURE

At the macrostructural level, Remedy Entertainment's offering has a closer relation to a television series than a video game. The game is divided into six large episodes that are opened and closed with cutscene narrative possible worlds. But the main influence of the audiovisual series appears with two essential elements. First, the ending of the episode is always produced with a cliffhanger – an event that enhances suspense – and, second, the new chapter begins with a cutscene in the style of a compilation, with the text "Previously on Alan Wake"

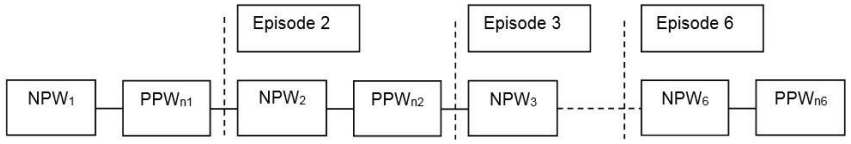


Figure 16. Framework of worlds in Alan Wake.

This strongly linear and cinematographic structure already gives us a glimpse of an essentially narrative experience in the ludofictional world. The intensive use of small suspensions in the metalepsis through brief cutscenes favors a focus on the vision, a configuration of the cinematographic plane that marks both the objectives – the camera moves away until the objective is reached and returns to the player character – and the threats – the appearance of a particularly dangerous enemy.

On top of that, the episodic nature of *Alan Wake* seeks a clear and direct understanding of a fictional framework given in autonomous units. Thus, the opening is a summary of past events and a strict linking of possible worlds, along with the insistent appearance of cutscenes to direct the player's gaze, shows a fragmented ludofictional world in autonomous units with a global sense, in the likeness of contemporary series such as *24* or *Lost*.

5.4.3.- THE RUSSIAN DOLL STRUCTURE OF TERROR

The multi-person world of *Alan Wake* is manifested as a beautiful and vast rural environment in which the forest, the typical American village and mountain cabins define the game space. Even though it is common to find different characters, the adventure occurs from the isolation of the hero and his confrontation of the oppressive and supernatural force, the Dark Presence, which determines both the destructive concept of power and the rushed rhythm of different events as they are channeled into a fight for survival. In this sense, the player establishes a certain imbalance that favors the configuration of a physical world rather than a dialectic one.

In this struggle between Wake and the darkness, the constellation of entities is nourished, on one hand, by a few ally entities and, on the other hands, by the helpless, treacherous or openly hostile agents.

The category of allies is formed by two entities outside of the conflict and a third who provides a much wider sub-world of knowledge. Both the sheriff Sarah Breaker and Barry Wheeler, Alan's literary agent and the humorous character of the game, support the player character in his search to find out what is happening from complete ignorance. However, Cynthia Weaver, called the Lady of Light because she always carries a lantern[3], is presented as a mysterious entity whose knowledge of the situation – and the steps to follow – is much wider than the rest of the fictional entities.

On the other hand, the remaining agents either do not have a relevant role in the shaping of the worlds – in general, ignorant residents of Bright Falls such as waitress Rose Marigold, or they

3. There are numerous connections between the television series *Twin Peaks* (David Lynch and Mark Frost, 1990-1991) and *Alan Wake*, from the aesthetics of the town and the buildings – especially the hotel – to the presence of FBI in the framework of worlds. In this case, the intertextual gesture is produced between the Lady of Light and the famous Log Lady in the American series, a woman obsessed with a wooden trunk.

turn out to be traitors, such as FBI agent Nightingale and the psychiatrist Emil Hartman, a specialist in treating artists with creative crises. The most perverse dimension of the agents consists of the Taken, area residents who have been subjected to the power of darkness and are trying to eliminate Wake and his allies and, on the other hand, the Dark Presence, the incarnation of Barbara Jagger, Zane's wife.

In this way, the characters are constructed as autonomous beings – favored by a third-person point of view of the virtual journey genre – provided with different motivations: Alan and his allies try, first, to rescue Alice and also, to exile the Dark Presence, while the latter discovers Zane's plan and sees Alan as a real threat to its freedom.

The conflict that emerges between these desired sub-worlds is not defined in a single fictional level, but rather *Alan Wake* sets forth, in a rather innovative way, the enlargement of levels of the diegesis. In a similar way established by the series *American Horror Story* (Ryan Murphy and Brad Flachuk, 2011), the game mixes both spatial-temporal components of different linked planes of reality – including the real-supernatural axis – with the levels evoked by different intradiegetic narrators. In this last case, the game shows a very complex fictional structure in three different levels as the form of a Russian doll: each level includes and is determined by another immediately superior one. Thus, Thomas Zane is the author of a story – level 1 – in which Alan Wake writes his autobiography – level 2 – of his adventures in Bright Falls – level 3.

The compression of different levels is manifested in several ways. First, Alan finds, along the path, different sheets that he himself has written but does not remember having made. We know that he is the author because it is his voice that reads the text aloud. But the most interesting part is the consequences of his reading. The second page of the manuscript says:

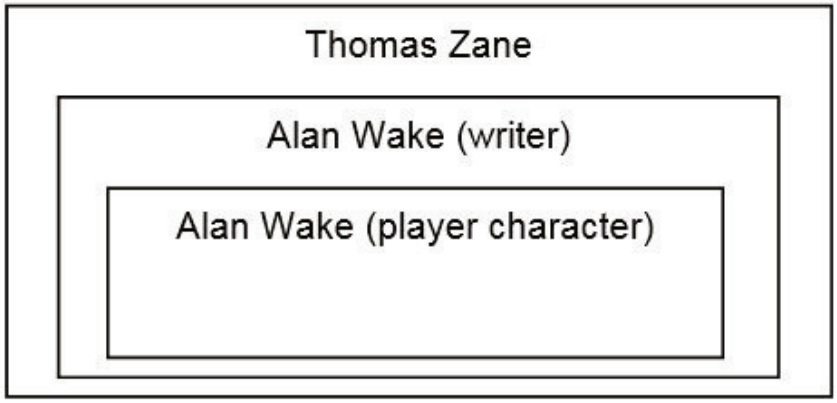


Figure 17. Fictional levels in Alan Wake.

> "The man turned to face me. His face was covered in shadows. It was hard to make him out in the darkness of the forest that surrounded us, but the axe he lifted was plain to see. It glistened with the blood of his victim.
>
> He grinned madly. The shadows were alive, distorting his features.
>
> It was a scene from a nightmare, but I was awake."

Just after he finishes reading the text, the player character finds himself exactly with the Taken turning to face him. In this way, the constant presence of Alan Wake, the intradiegetic narrator of the texts scattered throughout the game space, creates a sensation of inevitable determinism regarding the looming events. This enlarged influence from the narrator level to the player character is strengthened by the access of Thomas Zane himself in the game world. The presence of the writer saves Alan in the primary playable world and his manifestations become more common when advancing in the adventure, appearing to the hero in a diving suit. At the end of the game, Zane shows Alan – the player character – with the help of Cynthia Weaver, the ultimate weapon to destroy the Dark Presence. The Lady of Light has dedicated her entire life to hiding an object in the depths of a dam and a secret room full of light bulbs to prevent access by the

Dark Presence. Upon entering the room, Alan finds a sheet and reads it. In this case, the narrator voice is not Alan's from level 2, but is Zane's directly:

> "(Alan player character): The page was autobiographical, a page from my childhood, but I didn't write this. It was a page written by Thomas Zane. None of them were supposed to exist anymore.
>
> (Zane): Alan, who was seven years old, would fight sleep to the bitter end. When he did sleep, he soon woke up, screaming, the nightmares fresh in his mind. One evening, his mother sitting by his bed, his mother offered him an old light switch. She called it 'The Clicker' and clicking on the switch would turn on a magical light that would drive the beasts away."

Alan's reading of Zane's text – which as such does not imply an interruption of levels – shows how every construct of possible worlds is strongly determined by an intradiegetic narrator in level 1. Thus, Zane designed Alan's life, made him real, and depicted him in an autobiography that he doesn't remember ever writing.

Finally, it is important to note that, as previously mentioned, the diegetic enlargement not only affects narrators and characters, but also displays effects on spatial-temporal elements. A significant deconstruction of the scenes are produced – such as the disappearance of Alan's cabin – accompanied by the intensive use of different anachronisms and the appearance of dreams and nightmares. In this way, flashbacks are used both to show moments previous to his arrival at Bright Falls and the relationship issues between Alan and Alice as aspects more related to the hero's profession. In this sense, the television devices play an important role in the development of the adventure. Some broadcast interviews of the writer in popular late night shows, while in other cases, the television turns on only to show a completely achronic and irrelevant scene that does not belong to the fictional level of the player character.

5.4.4.- SURVIVAL BETWEEN LIGHT AND SHADOW

The configuration of naturalized metalepsis is instrumentalized through a minimalist interface that is limited to showing the minimap, the number of bullets and flares and the lantern duration. These elements clearly define a very specific game mode that is established in the lightness-darkness conflict – the Lady of Light and Zane against the Dark Presence, the human against the supernatural, good against evil – and that implies a clear asymmetry between the possible actions of the player character and his enemies. The Taken are encased in a cloak of darkness, a protection that, besides complicating visibility in the middle of the night, protects them from traditional weaponry. The only possibility that Alan has to survive, and that is derived from Zane's teachings, consists of destroying the cloak with a direct light – for example, a lantern or some similar device – so, once cleared, he can use firearms.

In this way, in the rural and natural world where light sources are few in the middle of the night, darkness becomes a very powerful psychological enemy. The combination of a hostile and difficult to perceive environment, along with the scarcity of light sources and weaponry leads the player to establish game strategies focused on the austerity of weaponry and frenetic movement. Staying still means death, in the same way as wasting bullets or lantern battery. Additionally, this preoccupation is enhanced by not taking precautions with the possible actions for attacking through the necessary recharging of weaponry and light sources, allowing enemies to advance without being attacked.

The game mechanics highlighted in *Alan Wake* are not of pure and simple action. Even if it is true that the world configures a destructive progression in which Alan cannot advance levels, the limitation of the weaponry, recharge times and a few stronger and difficult to kill enemies manifest as a space of permanent fleeing and collaboration with surrounding objects. Alan is safe beneath the streetlights but when returning to the darkness, the shadows once again stalk him, so it is key to locate light sources,

take shelter and use weapons only in essential moments. In this way, *Alan Wake* is constructed as a survival game from the scarcity and management of strategies, taking into consideration the possibilities of the environment.

From the perspective of extraordinary metalepsis, the game sets forth, as we have seen previously, a rupture in the limits of the enlarged diegetic framework. Zane's access to the player character level, embodied as a diver, implies a double breaking: from level 1 to level 2 and from there, to level 3. In any case, it is important to highlight the presence of the two main levels in which the player character does not make use of metalepsis. Here there are no ruptures in the framework, but rather a reading of text that is illustrated through the original voices of their creators, but that never transcend the fictional levels to relate to the fictional entities of the game world.

In conclusion, *Alan Wake* puts to test, within the ludic terrain, the conventions of a rural psychological terror with an episodic structure and a dietetically enlarged world. Additionally, the presence of different intradiegetic narrators manifests both in the determinism of the story regarding the game and the dramatic potential that may be achieved when the narration and the ludic experience are allied to created complex ludofictional worlds.

5.5.- STARCRAFT II: WINGS OF LIBERTY (BLIZZARD ENTERTAINMENT, 2010)

5.5.1.- THE FICTIONALIZATION OF REAL-TIME STRATEGY GAMES

The genre of strategy was born in the mid-eighties thanks to different adaptations of board games that recreated great military conflicts, *Empire* (Walter Bright and Mark Baldwin, 1987) and *Balance of Power* (Chris Crawford, 1985) being its greatest examples. These video games configured a precarious graphic space and used the alternation of turns between players as the main game mechanism.

From the 90s until today, turn-based strategy, with hugely successful titles such as the previously seen *Civilization V* or the highly complex *Europa Universalis* (Paradox Entertainment, 2001), have been complemented by a set of works that define the playability from the simultaneity of actions, which have been called real-time strategy games, or RTS.

Unlike the turn-based system, real-time games prioritize a short-term strategy consisting of the speed of collecting resources and constructing units. Its great popularity and establishment as a hegemonic model within a genre meant that, from the foundational *Dune* (Cryo Interactive, 1992), RTS have consolidated a set of relevant conventions that have been applied both in Ancient World battles – *Age of Empires* (Ensemble Studios, 1997), *Age of Mythology* (Ensemble Studios, 2002) – and in those that fictionalize fantastical worlds of a different nature – as occurs in *Command and Conquer: Red Alert 2* (Westwood Studios, 2000) or in *Warcraft III: Reign of Chaos* (Blizzard Entertainment, 2002).

Stacraft (Blizzard Entertainment, 1998) is born in this context as a spatial RTS in which different interplanetary conflicts occur between three conflicting races: the Terrans, humans that were exiled from Earth and seek new homes to establish themselves, the Zerg, beings aesthetically similar to those seen in the movie *Alien* (Ridley Scott, 1979) and who aim to assimilate every living race, and the Protoss, aliens with advanced technology and remarkable psychic abilities. The arrival of *Starcraft* not only entailed the birth of a great franchise, but also established, on one hand, the possibilities for each race in play to have unique properties and units – until that time, it was common that the only difference between armies was their name or color – and, on the other hand, the appearance of convincing stories and charismatic characters.

This game from Blizzard Entertainment has been a true social phenomenon for many years, due to its multi-player aspect, managing to organize great official tournaments where

professional players competed for prizes and distinctions. Thus, it is not strange that the release of *Starcraft II* was experienced as a true revolution in the world of strategy games.

In 2010, *Starcraft II* began a ludofictional world where the first title had ended. Amid the conflict between races, Arcturus Mengsk, supported by Jim Raynor and Sara Kerrigan – the latter a member of a special unit with psionic powers called The Ghosts – aim to end the despotic government of the Terran Confederation. After different battles, Mengsk is proclaimed emperor, betrays the trust of Raynor and leaves Kerrigan to his luck before the Zerg hordes. Jim, in love with the Ghost, fails in his attempt to rescue her and flees from Mengsk, robbing his flagship, the Hyperion. From this moment, Raynor leads the resistance against the Mengsk empire while the Protoss aim to recover from the two different military conflicts and the Zerg reunite under a new leader, Sarah Kerrigan assimilated and converted into the fearsome Queen of Blades.

Starcraft II is constructed from two levels that, in their relationship, weave together a rich ludofictional world. On one hand, the appearance of the constellation of entities and the combination of sub-worlds provides a fictional explanation from a strategic dimension and, on the other hand, the decision of each one of the conflicts is channeled through the conventions and gaming experiences of the genre.

5.5.2.- THE STRUCTURAL DIVISION BETWEEN KNOWLEDGE AND ACTION

The macrostructural dimension of *Starcraft II* clearly differentiates between those primary possible worlds inserted into a logic of long-term strategy and others based on the synchronism of the game in real time during the military conflict, both cases linked together thanks to the narrative possible worlds.

Safe areas configure groupings of primary possible worlds into three large contexts: the bar on planet Mar Sara – the start – the Hyperion ship – which accounts for over 80% of the game and allows access to different worlds on the war plane – and the advanced base on planet Char – the end.

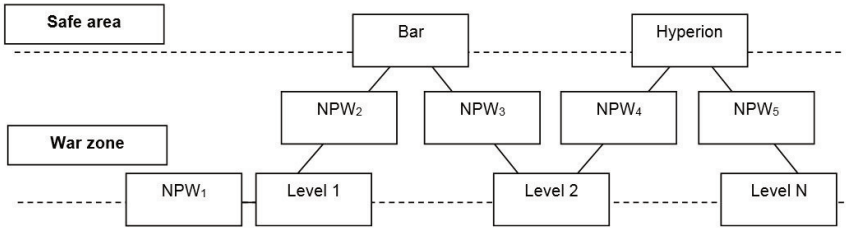


Figure 18. Framework of worlds in Starcraft II: Wings of Liberty.

In contrast, the war zone consists of worlds not linked to each other, but dependent on the choices and modifications that have been made in the safe areas. These isolated worlds are what constitute, in and of themselves, the gaming experiences of the real-time strategy game genre.

Narrative possible worlds have a key role in the configuration of a coherent and epic structure. They serve as an introduction to the game and also as a transfer between the safe areas and war zones, especially for narrativizing the game objectives and giving greater variety to homogenous game mechanics. Thus, narrative possible worlds are a unique way of accessing one level to another, both to obtain a fictional justification of the mission – from the safe to the warlike – and to show a coherent dramatic balance – from conflict to rest.

5.5.3.- SAFE AREAS AS FICTIONAL EXTENDERS

Multi-player worlds in safe areas prioritize the dialectic and constructive perspective in game mechanics. From a point of view of board games and characters in level 0, the user can select different objects in each one of the rooms visited. In the case of Hyperion, which contains arsenal rooms, the laboratory, the

bridge, and the cafeteria, each scene defines relationships with the rest of the fictional entities and a set of unique actions.

The arsenal allows the expansion of weaponry during the war period, so the possible actions here become transitive in relation to the future game worlds in the war dimension. In a similar way, the laboratory provides improvements based on the technologies of other races and, also, gives access to dialogue with Doctor Hanson.

On the other hand, both the bridge and the cafeteria play an important role in the game development. The cafeteria contains the main elements of socialization within the constellation of entities and the knowledge sources of what is happening throughout the universe. Here the user may hire mercenaries, engage in dialogue with former battle companion Tychus Findley and the mysterious Ghost Gabriel Tosh, or explore the game space. In the last case, objects scattered throughout the cafeteria – from photos to memories obtained in the most recent battles within the war level – act as fictional extenders by telling, for example, past experiences on the battle field, Jim's longing for Kerrigan or the most recent tragedies. Television present in the scene is the main knowledge method of the state of stellar conflict, even with certain distinctive features. Here it refers to the potential of communication methods for addressing more remote information, but also to the ability to manipulate journalistic points of views in relation to a hegemonic power. So, the presenter Donny Vermillion embodies submissive journalism and the defense of a repressive and anti-democratic power, while the censored reporter Kate Lockwell exemplifies a war correspondent who, far from consenting to the absolute truths hatched in the Empire's dispatches, does nothing more than throw questions into the air and question the unquestionable. In this sense, it become interesting to see how Lockwell gains a presence at the expense of Vermillion while the Resistance keeps prevailing and the proof of Arcturus Mengsk's misdeeds is revealed.

Finally, the bridge allows a connection between the safe area and the war zone through the selection of game levels. The selection of the mission is not random, but rather is closely linked to the relationships of the constellation and different motivations. A good example appears with the ethical decision that allows acceptance or rejection of a fictional entity on the team. Thus, Jim can help Tosh free prisoners from a high-security prison – which implies releasing dangerous murderers but also freethinkers and politicians opposed to Mengsk – or help Nova, an Empire ghost that alerts the hero of the dangers of that decision. The option chosen, whatever it may be, becomes definitive and implies a set of bonuses, but also restricts the relationships with those fictional entities.

Another way of determining war zones from safe areas consists of choosing certain decisions in a strategic order. In the end of the game, an advanced base on planet Char is established. From there, Jim will choose to attack slothien or the nest of the mutalisks, the aerial units of the Zerg. Only one of the two options can be selected, and its positive resolution implies eliminating that type of enemy from the final battle. Therefore, here the selection of the game world has an ultimate effect on the final war level by linking the tactical and planning with battle field strategy.

Thus, the safe area groups a set of scenes aimed to extend the fiction, weaving relationships between fictional entities of the constellation and determining the war period through increasing possible worlds – different levels to play according to the characters' motivations, ethical decisions or strategies – and the expansion of the game possibilities – with, for example, the improvement in weaponry, technology or the hiring of mercenaries.

5.5.4.- WAR ZONES OR THE INTENSION OF CONFLICT

Unlike the safe area, the war zone configures an exclusively physical multi-person space, in which the game mechanics are

channeled through different constructive-destructive actions. Each one of these worlds is inserted between two narrative possible worlds that fulfill different functions. The first of them links security to militarism by establishing general objectives for the level, while the latter makes a dramatic balance after the completion of the mission.

As mentioned, the safe area has important effects on both the intensional configuration of the conflict and understanding the mission. The improvements in weaponry and technology, or the hiring of mercenaries is made clear here with more units and new possible actions that favor the asymmetry in the game, while the appearance of characters in the form of portraits – a specific manifestation of the character-portrait due to limited action in this set of worlds – serves to specify concrete objectives. In this sense, the war zone starts from an inherited fictional situation of a previous world and specifies it in different missions. Thus, if the objective is "to save the soldiers from the Zerg hordes" the specification of the world will make each one of the phases – save the group 1, save the group 2… continue appearing on the minimap, whether in a simultaneous or linear way, and their completion as a whole makes the dramatic balance emerge.

Both point of view and the interface and the temporal issue are deeply rooted in the genre conventions of real-time strategy games. From an isometric perspective and with a limited map – the vision of a board game – the interface consists, at the bottom, of a minimap, the information panel and the action panel, while at the top, of the objective and the mineral and gas indicators.

The game logic links different possible actions to the alternation of construction and destruction. The player must collect resources, construct buildings and, after that, recruit different troops for the army. There is a balance between construction and its limits – the scarcity of resources, the maximum population of the base in relation to certain buildings – and the configuration of an army that operates according to the weakness of the enemy race, economic expenses and preferences in military strategy.

This relationship between construction and destruction is especially determined by a temporal dynamic in which each contender operates in real time, so speed and short-term decision making define the game strategies. Some variants of the role of temporality within these levels are, for example, enduring hordes of enemies during a given time, or using only certain cycles – day or night – to attack enemy positions.

In conclusion, *Starcraft II* shows a ludofictional world composed, on one side, by a safe period guided by dialogue, the construction of knowledge and the fictional extension that it influences, and on the other side, a warlike, physical, constructive-destructive period that is strongly determined by genre conventions in its game possibilities.

5.6.- THE ELDER SCROLLS V: SKYRIM (BETHESDA GAME STUDIOS, 2011)

5.6.1.- FROM PEN AND PAPER TO VAST DIGITAL WORLDS

Role-playing video games – or RPG – have become, in the last years, one of the most powerful genres for creating fictional worlds and playability. From the 80s and 90s until today, the genre has evolved starting from titles strongly influenced by the role of pen and paper, including *Dungeons and Dragons*, *Pool of Radiance* (SSI, 1988), *Eye of Beholder* (Westwood Studios, 1990), *Baldurs Gate* (Bioware, 1998), *Icewind Dale* (Black Isle Studios, 2000) or *Neverwinter Nights* (Bioware, 2002). Role-playing games display large game worlds very rich in fictional entities, cities and natural elements such as epic missions and heroic combat against beings of all kinds. Along with this elevation of fiction, the role-playing game allows the progressive construction of the player character, from his race, profession and aesthetics to his abilities, power and, sometimes, ethical or ideological frameworks.

All these features are present in *The Elder Scrolls V: Skyrim* (later as *Skyrim*), the fifth installment of the successful saga *The Elder Scrolls*. Taking place 200 years after *The Elder Scrolls IV: Oblivion* (Bethesda Game Studios, 2006), *Skyrim* immerses the player in

a fantastical world isolated by civil war between the Imperial Legion and the rebel Stormcloaks. In this context, the return of dragons together with their leader Alduin will forge peace between the contenders and lead the player character – called Dovahkiin, or Dragon's Blood – to discover his true destiny.

5.6.2.- GAME SPACE AS THE CONTENDER OF WORLDS

At the macrostructural level, the adventure from Bethesda locates the center of the action in the game space itself. All possible worlds are inscribed in the physical place of the Nordic region of Skyrim, i.e. all are accessible, according to their conditional features, such as geographical areas of the same, vast map, even if each of them has different roles in function of its hierarchical relation.

Primary Possible Worlds are grouped in three great acts that configure the backbone of Dovahkiin's experiences, from his escape from the first dragon attack to the death of the god Alduin. But, unlike other, more rigid ludofictional worlds, here the hero can momentarily abandon the path of the vertebral axis and take on a set of secondary possible worlds constructed around different factions.

Factions are organizations the player character may join to fulfill missions until achieving a master level. The world structure of these secondary possible worlds is determined by the specific fictional intension of each one of the factions, so the fictional entities and objects will be different in each one of them. The main factions and, therefore, the main groupings of secondary possible worlds are Bards College, Volkihar Clan, Blades, College of Winterhold, The Companions, Dark Brotherhood, Gray-Manes, Greybeards, Imperial Legion, Stormcloaks and the Thieves Guild. As we can see, each faction provides different secondary possible worlds notwithstanding their fictional transcendence in the rest of the worlds. Thus, both the Greybeards and the contenders of the civil war take on an important role in the framework of primary possible worlds,

while the other collectives such as the Grey-Manes or the Thieves Guild establish their worlds from a lens more focused on local conflicts or the specialization and improvement of certain abilities.

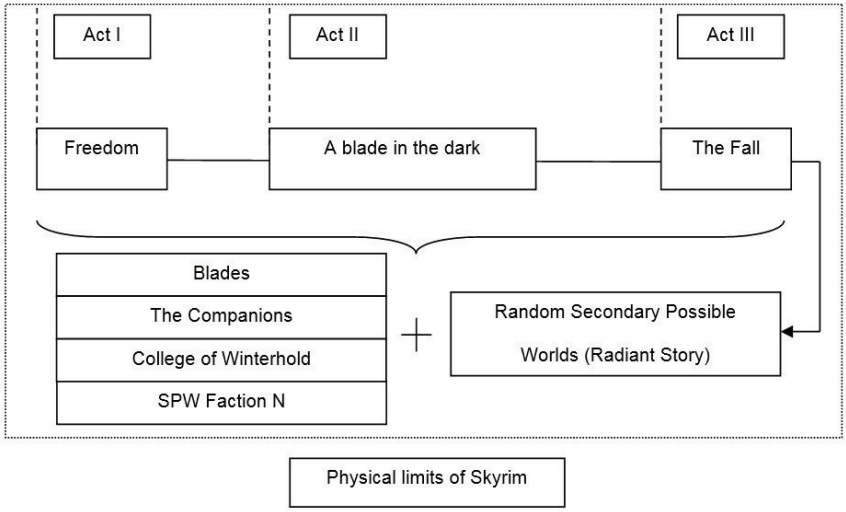


Figure 19. Framework of worlds in The Elder Scrolls V: Skyrim.

However, the world of Skyrim does not exhaust its possibilities with the fulfillment of primary and secondary possible worlds. Bethesda has included a new system of random secondary possible world creation called *Radiant Story*, which unlimitedly poses secondary possible worlds, keeping in mind the past and present actions of the player character. In this way, neither the vertebral axis nor the paths of each one of the factions manage to come to an end, since the system will continue posing playable offerings, whether after the completion of a previously scripted world by the game designer or during the transfer between them.

Finally, *Skyrim* has very few narrative possible worlds of the cutscene variety, while ingame scenes are the most common and exert a similar role to that previously seen with *Portal 2*.

5.6.3.- THE FORGING OF A HERO

Skyrim exemplifies, in the best way possible, the idea that playable fictional worlds transcend the limited analysis of game rules or narratives in the new digital medium. The vast game space created by Bethesda asserts the connection between a savage, wild and dangerous world based on conflict and survival – the man-nature axis – and another more populated and civilized world determined by social relations that aim to balance dialectic action with fiction – the man-society axis.

Skyrim constructs a world to be discovered and observed. The beauty of the game does not lie in the objectives, but above all the path of journeying to achieve them. The enormous distances and variety of natural spaces and town – the latter more scarce and isolated – produce a poetics of fictionality that cannot be perceived from the idea of story. Go around, watch the sun set, witness a snowfall and the sound of the wind between the rocks… do so without a given objective and experience the joy of a new world, which is what defines both this world and other ludofictional worlds – see *Red Dead Redemption* (Rockstar San Diego, 2010) or *Shadow of the Colossus* (Team ICO, 2005) – where the poetics of fictionality emerge from the configuration of the world itself and contact mediated through the player.

In keeping with this world of discovery, the player character appears as a being to construct. He has no voice – except when he uses powers called Power Words – nor does he show specific motivations or have strong ties to a constellation of agents. The player character is thus, a solitary entity more tied to the exploration of a world than with the resolution of internal conflicts and the management of intense social networks.

The design of the hero, one of the features of role-playing games, is fairly synthetic. We must chose a name, one of the ten available races and a constellation – a sort of zodiac sign that provides specific bonuses. From this starting point, the player character can increase different abilities in the game, advancing until level

81 and improving his life count, magic and resistance. In this sense, the most interesting aspect of the evolution of the character is that there are no predefined classes or professions, but rather the abilities are increased by repeated and successful use of them – although sometimes failure is also assumed as an ability. Thus, *Skyrim* shows the theory of action at its highest expression: the player character is what he makes himself.

This logic of action as a construction of the character is also based on the evolution of possible worlds. The primary worlds acclaim the motivations of the hero born for glory and guide him towards the learning of the mighty Power Words and the emergence of the Nordic semi-god. But, in turn, secondary worlds entail, through the improvement of abilities and necessary powers to better confront primary worlds, the personal forging of Dovahkiin.

In accordance with the above, the system of random worlds of *Radiant Story* is possibly the best display of the relevancy of who the hero is, what he has done, what he is doing and where his actions will take him. The engine created by Bethesda compiles the player character's history to modify the world and adjust it to the resulting fictional logic. If the hero kills a wealthy citizen, it is possible that in subsequent moments some murderer attempts to finish him off under the request of the deceased man's family. Or, another good example, if we marry a fictional entity but, in previous missions, we made him fall in love with another subject, it is fairly probable that he is shamelessly unfaithful in subsequent events. In other words, Dovahkiin is more intent on his freedom of action than unwavering fictional motivation, but this does not prevent the result of his actions from influencing the internal motivations and relationships of the constellation of entities, especially regarding ethical decision-making: the hero is what he does, and the others treat him accordingly as a result.

This hegemony of action can even involve the player character ignoring his destiny. In *Skyrim,* we can decide not to access the primary possible worlds and devote ourselves to wandering,

courting other individuals, marrying men and women, buying a house and decorating it or even becoming a vampire or a werewolf. In this sense, the game provides a dimension of self-selected objectives that are more typical of social simulation then traditional role-playing games.

5.6.4.- EXPLORING SKYRIM

The gaming experience provided by exploring the world of *Skyrim* formally translates into a modifiable point of view, a minimalist interface and the use of temporality as realist conditioning.

The point of view is initially established as a first-person perspective of the HUD variety – a character in level 0 – in which each one of the player character's arms is visible and the power and/or objective that he is carrying in each one of them. Also, this point of view is complemented by a third-person alternative that moves the camera to show the autonomous character of the virtual journey. While the first person is appropriate for solving all the necessary actions involved in a specific combat, the third person is ideal both for getting a better field of vision in the journey through *Skyrim* and for stealthily fleeing an enemy that is too strong.

In accordance with the utility of the different points of view, *Skyrim* hardly shows a game interface. The only information available is the location of the different possible worlds through a strip in the lower bar, an energy bar that reduces when running and a life indicator, along with an angle of vision in the case of the first person perspective. As we can see, the interface is designed by thinking of survival during combat as the prioritized value, so the other information is completely unnecessary.

In this sense, the transfer of weaponry to the metaleptic plane seems remarkable. While swords and shields use the cursor as an axis of combat, the bow appears as a good example of composed control. It is evident that it is not, in a strict sense, a mimetic

manifestation of a real bow, but it aims to translate the difficulty involved in the correct use of this weapon onto the gaming plane: the trajectory of the arrows follows the laws of physics, while releasing the button too soon prevents the axis from leaving with enough strength. In this way, along with the point of view and a few developed abilities, the learning of the correct use of weapons that he has at his disposal configures the main metaleptic activity as the survival of the player character.

Finally, temporality is established in real time, producing a synchrony between the transitive actions of the player character and his effects on the environment. This global ordering of time consists of two cycles, day and night, which have special influence on the lives of the game's fictional entities. Thus, the markets and shops are not open at night, while certain dishonest professions only appear in this cycle. This alternation in the urban environment has special relevance to the possible actions and possible asymmetry or deprivation. Thus, for example, the possibility of raiding a home and robbing objects found there is much easier under the refuge of night than in the middle of the day with streets packed with guards; while access to buying certain goods is never possible in the middle of the night.

In conclusion, *Skyrim* prefers exploration to motivational discovery, the fictional world to narrative experiences and/or rules, and what a character does that forges his own destiny from the hegemony of actions and the acknowledgment of his impact on the constellation of fictional entities that populate this very vast and beautiful ludofictional world.

5.7.- DIABLO III (BLIZZARD ENTERTAINMENT, 2012)

5.7.1.- THE LEAP FROM ROLE-PLAYING GAMES TO MULTI-PLAYER GAMES

The arrival of the internet and the establishment of broadband connection has fostered the emergence of a set of role-playing games that construct their fictional worlds by thinking of multi-

player games and the generative ability of random events. Popular and successful games such as *World of Warcraft* have established game worlds available online twenty-four hours a day that continue changing through different interventions of the game designers. These modifications of the ludofictional parameters have created completely new business models: consumption is not exhausted with the payment of a digital or physical copy, but rather is expanded either with the setting of a monthly fee or through free access – the so-called freemium model – but with the inclusion of different micropayments linked to the obtainment of objects or other fictional elements.

These types of continuous game worlds have been complemented in recent years by other role-playing offerings oriented more towards action and less focused on the construction of fictional entities. *Diablo III* is located precisely in this group of games, called *hack and slash* role-playing games, and provides a new perspective regarding the multi-player role-playing game: the dynamism of destruction as a group and the quick increase of levels for characters is much more important than the complementary mission of secondary possible worlds or the fictional intension of the vertebral axis of the ludofictional world.

The fictional framework of *Diablo III* starts twenty years after the expulsion of demons in *Diablo II* (Blizzard Entertainment, 2000). The player character, along with the elderly Deckard Caín and his stepdaughter Leah, must prevent the return of the forces of hell by helping the fallen Archangel Tryael discover what power hides an artifice called the Black Soulstone.

5.7.2.- CIRCULAR FICTION AND THE PREEMINENCE OF GROUP PLAY

The macrostructural disposition of *Diablo III* is established by four acts in two levels. On one hand, each act provides a set of necessary and scripted possible worlds, along with other secondary possible worlds – a maximum of six per act, showing between three and four per game – that are produced randomly.

On the other hand, the actions association with the reparation, improvement and trading of different weapons and objects are grouped in safe areas – New Tristram, Caldeum and the Pandemonium Fortress – which are accessible from the primary possible worlds via teleportation. The cooperation of both levels allows the passing from one act to another through the cutscenes of narrative possible worlds.

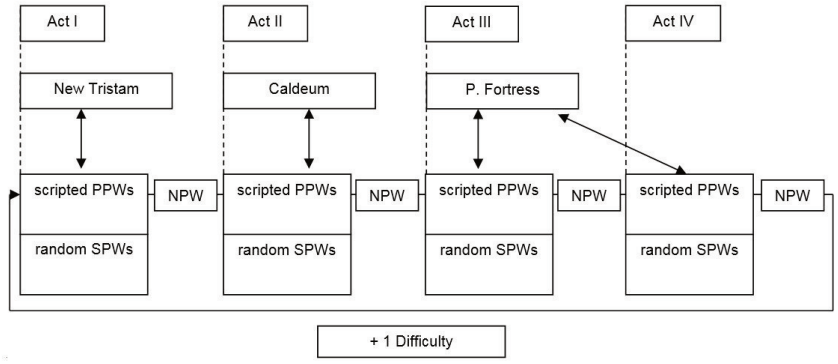


Figure 20. Framework of worlds in Diablo III.

But the true distinctive feature in *Diablo III*, which has much to do with its orientation to the multi-player game, is the configuration of a circular fiction. Once the last act has ended, the player has the possibility to return to relive all the possible worlds but, this time, with an increase in the level difficulty from Normal, Nightmare, Hell and, finally, Inferno. The overcoming of any cycle of difficulty implies the possible reiteration of all previous possible worlds – of the same or inferior level of difficulty – in an individual or sequential way. In this way, the ludofictional world is not exhausted after its fulfillment but rather enables a modular structure that obeys the segmentation of visited worlds and prioritizes the re-playability of the player's favorite scenes.

5.7.3.- EXTRADIEGETIC COOPERATION IN THE MAKING OF THE HERO

Diablo III sets forth a multi-player and cooperative world that assigns dialectic and constructive relationships to the safe areas – and, occasionally, to certain caravans that can be found in the transformation of primary possible worlds – and the physical and destructive-constructive relationship at the level of the game dungeons.

The safe areas bring together all merchants, the blacksmith, and the main fictional entities that participate in the constellation. All possible actions here become dialectic by not allowing the attack and are oriented to different constructive manifestations: the buying and selling of objects, the repair of armor and weapons, the placement of gems in powerful objects or the forging of new tools.

On the other hand, primary possible worlds demand constant war activity against a constellation of aggressive and opposing fictional entities towards the player character. Both the killing of enemies and the construction of part of the furniture is inscribed in a constructive-destructive logic by which experience points are obtained or other benefits such as objects or gold coins.

As previously mentioned, both levels operate from the cooperation between different heroes controlled by different users. Groups of four player characters are made with each one from a specific class – choosing between barbarian, witch doctor, monk, wizard and demon hunter – which determines exclusion in the use of certain weapons and armor and the specific use of certain abilities and powers. The configuration of the hero as a feature of role-playing games is simplified in favor of a quick and dynamic action game: after selecting class, the player will accumulate experience, advance levels – to a maximum of 60 – and with the obtained points improve and combine different available abilities.

In any case, the evolution of the hero is not only determined from diegetic logic. Blizzard implemented an auction house (now

closed) in which different accessories and armament could be obtained, with gold or real money, which would generally come from each player's findings in his games. This way of business fostered an intensive game of eliminating enemies who, upon dying, deposited objects of different values according to a random system, with those in higher difficulty levels being better. Additionally, the developer company also has intervened in the extradiegetic space by establishing different obligatory game patches that tend to balance the game but have a significant impact on the evolution of a player character. Thus, they have produced modifications in the difficulty of certain enemies, the cost of repairing objects – fostering a more restrained game that increases the value of the death of the entities – or the effects of the abilities on each one of the classes.

This extradiegetic influence has shown direct impact on the ludofictional world. On one hand, the auction house fostered "farming" activity – which involves killing enemies for the "harvest" of objects – in certain levels of difficulty, while the different patches have complicated the long-term foresight in the configuration of the player characters. But without a doubt, its greatest – and worse – effect has been that of simplifying the fictional game logic. Players ignore all the motivations of the entities and the turns of events, first because of the boredom that the circular fiction evokes and the lack of new content and, second, because of the game dynamics, consistently chaotic in the predominance of the increase in levels and the commercial exploitation of the auction house.

5.7.4.- THE HACK AND SLASH FROM HELL

The naturalized metalepsis of *Diablo III* is sustained by a well-made combination between the mouse and keyboard that facilities an experience of frenetic and unchecked action. Additionally, team work compensates for the asymmetry of individual action through a cooperation oriented to overcoming different waves of enemies such as the fortress of the final enemies. The logic of shared action implies a specialization

between face-to-face combat class – barbarian, monk – at a distance – wizard and hunter – and a mix – witch doctor – that establish unique possible actions.

The asymmetry of the set of actions is manifested through a double temporal suspension of the possibilities of the game. First, the more powerful abilities are subject to a given *cooldown* – i.e. the inability to use it for a given time – and, second, through the consumption of certain resources by each entity, which are recovered throughout the game, such as the monk's spirit, the discipline and hatred of the hunter, the witch doctor's manna and the wizard's arcane power. In this last case, the barbarian, as an exclusively face-to-face class, inverts the way to recover his anger: it only increases by suffering wounds and eliminating enemies. Along with the restriction of actions, the combination of possible actions of each class establishes the group strategy and their metaleptic linking in the form of combinations that cause the massive death of enemies and different bonuses that are obtained from them.

On the other hand, it is important to note the role of point of view and the interface for creating agile metalepsis in accordance with the rhythm of the game.

Point of view is isometric, with a camera focused on the player character while he goes through different passageways of the dungeons, which facilitates the strategic vision in the positioning of entities in relation to the enemies. Additionally, this third-person perspective produces an autonomous character whose only motivation is the destruction of the enemy, so the sub-worlds take on a very secondary role in the development of the game.

Finally, the interface is very focused on showing essential and necessary information for the development of the *hack and slash*. Along with the minimap and the objectives on the upper right side, *Diablo III* shows a set of icons and indicators on the top part of the screen that group life, a specific necessary resource

for making use of abilities, the assigned actions to the keys and a minichat.

In conclusion, *Diablo III* configures a ludofictional world designed for frenetic action and multi-player cooperation in which the circulation fiction and the influence of extradiegetic elements weaken the role-playing game potential in favor of dynamism and indiscriminate killing.

5.8.- THE MOVIES (LIONHEAD STUDIOS, 2005)

5.8.1.- THE EVOLUTION OF SOCIAL SIMULATORS AND THE SIMS PHENOMENON

In the late 80s, the successful irruption of *SimCity*, the most important simulator of cities in history, promoted an entire set of offerings oriented to the economic management of given territories or business models such as *Transport Tycoon* (Chris Sawyer, 1994), *Capitalism* (Enlight, 1995) or the most recent *Anno 1404* (Ubisoft, 2009). However, the complexity of these games and the influence of technicalities in the learning curve – except, paradoxically, in the case of *SimCity* – has relegated the popularity of this genre to a very specific and narrow niche market.

In 2000, Will Wright surprised the entire world with the launch of *The Sims*, a social simulation game that completely distanced itself from the economic model by focusing on the resident entities of the fictional world and their different needs. In this way, the evolution of the saga and its influence on important online games such as *FarmVille* (Zynga, 2009) showed the ludic potential of the management of motivations and sub-worlds of fictional entities.

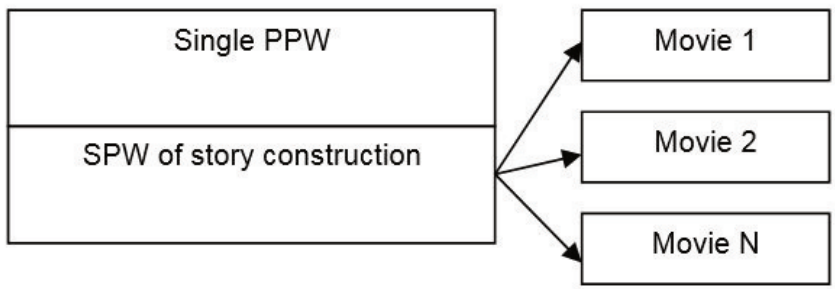
However, the two perspectives within the genre of simulation did not delay in merging. The management of the Caribbean dictatorship in *Tropico 4* (Haemimont Games, 2011) is a good example of the simulation of a macroeconomic management

model in accordance with the active role of character motivations in the transformation of the ludofictional world. And it is precisely in this new game approach where *The Movies* is inscribed, a game that we shall analyze here.

The Movies configures a fictional world on the fence between the two previously seen models. On one hand, the *SimCity*-like management is translated into the survival of a film studio from the birth of this new medium in the early 1920s until today. On the other hand, the influence of *The Sims* becomes key for understanding the importance of sub-worlds and the motivations of different members of the *star system* of the American industry.

5.8.2.- THE FILM STUDIO AS A GAME WORLD

Following genre patterns, the static macrostructural dimension in *The Movies* is focused on a game space that consists of the only primary possible world. Together with this and within the same diegetic context, a secondary possible world is established that allows the creation of different movies and that can be used in two different ways. First, the movies created by the user can be incorporated into the game dynamic, i.e. they can be used within the game as another fictional element. And, second, the films can be exported to the extradiegetic dimension created by the community of users and the video channels as audiovisual stories completely autonomous from the game itself.



5.8.3.- PLAYING IN HOLLYWOOD: STARS, STUDIOS AND FILM GENRES

The bird's eye perspective and the typical point of view of board games mark the limits of the game space and guide the way of constructing and managing our film studio. In relation to this diegesis, the player character, who is implicitly constituted by a strict degree of 0, appears as one of the magnates who invested in the thriving American film industry of the early 20th century.

This unique world finds the main axis of ludic evolution in the temporal dimension. In this sense, a timeline shows, on the upper part of the screen, the present and future events through little icons that move to the right or left, and that can be accelerated or paused at the user's will. The most important events of the 20th century and the specific history of film determine the game temporality through three different strategies: fictional anchoring, the influence of the appreciation of film genres, and the sanction and establishment of game objectives.

The fictional anchoring of the passage of time – of the possible world or Fictional Time – appears with a paradoxical and cynical voice-over of the announcer of a local radio. His performance serves, on one hand, to inform the user of a future event – a kind of oral prolepsis – as in the case of 1933, when commenting on the existence of new small, evil European leader in Germany. And, on the other hand, as a commentator of public opinion of the moment, for example, cutting trendy films during the 20s or considering communism as a virus to be eradicated during the Cold War.

This parallelism between the passage of time and its association with important historic events has a key impact on the five projected film genres – action, horror, comedy, romance and science fiction – and their economic and social potential. In this way, the planning of films and the expectation of genre conventions must be taken into account in both present and future events, and especially those more transcendent ones. Thus, the Crash of 29 fosters comedy, Vietnam sinks the box

office with action movies and the arrival of the man on the Moon creates interest in science fiction.

The third and last strategy that links temporality with fiction and game strategy involves the balance of the actual world and the restarting of victory conditions with new objectives. By emulating the American industry, *The Movies* establishes a balance of action through a scoring of stars – the studio's budget, success of the stars, quality of the facilities, movie ratings – and the dramatic balance in a prize ceremony similar to the Oscars of Hollywood. Based on the result in the balance of action, the dramatic balance can provide different trophies that benefit our industrial activity – for example, improving the happiness of our stars – which will establish new objectives to fulfill.

In any case, the existence of only one world determined by the passage of time implies the acknowledgement of a unique game experience. In reality, *The Movies* shows a multi-person world that involves, on one hand, the harsh criticism of the industrial models of film production and, on the other hand, the parody of the vanity and egocentrism of the American star system.

That the game focuses on the industrial structure is evident by the design of the film studio itself. Actions dedicated to the construction of the center are, in some cases, completely necessary for the cinematographic production – the building for scripts, casting, shooting equipment and production, among others – while others serve to improve labor conditions and prestige. In the same way as *SimCity*, we must design a connected, friendly environment that considers both the facilitation of movie shooting and the satisfaction of the different demands from actors and directors.

The perception of film as a business implies the incessant production of movies oriented to the satisfaction of the most booming genres of the time. Stereotypes, age and beauty of the actors, the novelty of the scenarios or the chemistry between characters are some of the multiple variables that the player must

keep in mind when producing several movies serially. The game of movie creation becomes a routine based on pre-production, production and, in more advanced moments, post-production and very intense marketing campaigns, which serve to cover up those less significant products. In this way, *The Movies* sets forth a game mechanics oriented to the serial production of movies in a genre that excludes other options – independent and experiment film – in favor of the blockbuster business.

The management of fictional entities starts from the labor hierarchy of the film sector to merge two completely distinct constellations. The first-rate agents – constellation 1 – are the actors and directors, the stars of the new medium. These entities receive the highest salaries, have more benefits at the facilities and can access personalized treatment. In contrast, the rest of the agents who participate in the industrial sector are considered second level – constellation 2 – have an instrumental role in service to constellation 1 and never show their motivations and needs. In this group we can locate the technical team – cameras, script writers – helpers and assistants for the stars, scientists, janitors and workers.

The preeminence of the industrial model in film production makes constellation 1 the most important to manage. Most of the game actions revolve around these fictional entities and, especially, their sub-worlds related to personal and professional ambition. The stars want nicer clothes, a better trailer, the best assistants and facilities. The motivation of all the entities lies in the *American Dream* of film: becoming a rich superstar admired by the entire world. Unfortunately, this motivation drags all the sub-worlds to an egocentrism consisting of bipolar hysteria that merges the success or failure of the movies in which they participate and the difficult professional and personal relationships that are established within the constellation itself.

In this way, and along with the game model of serial movie production, the user must keep in mind the balance between the sub-worlds if he wants to achieve the proposed goals. Thus, the

failure of some of the sub-worlds implies catastrophic results for the mechanism of film production: boredom, excess stress or displeasure with his salary or luxury goods usually pushes stars to different forms of addition – eating too much, showing up drunk to shootings – and in extreme cases, they may require long stays in rehabilitation programs.

5.8.4.- SUB-WORLDS AS METALEPTIC INDICATORS

Metaleptic management starts from the knowledge of the stars' needs and the attempt to resolve them through the planning and construction of different buildings. The interface shows, through a system of balloons, the current levels of the sub-worlds for each one of the stars. Grouped in different blocks, these indicators are different variations of the motivational aspirations of the stars and the specification of their personal and professional reality in the desired sub-world. Thus, they show, for example, bars for desired salary, image, a trailer or an assistant; if they do not reach stable levels that ensure their stability, the star will become increasingly unhappy. Additionally, the starting necessity levels – for example, the fictional entity is prone to getting stressed or drinking too much – and the increase in the star's prestige create an asymmetry between each one of the actors and directors that require personalized attention.

In conclusion, *The Movies* sets forth a paradoxical and critical ludofictional world of the American film industry and its star system through a routine strategy for the serial production of films and a dispersed and simultaneous management of the egocentrism of the stars of the seventh art. The game mechanisms use the understanding of interface elements and an appropriate metaleptic management of this information in at least three given fields: the needs of the studio – repairing facilities, lawn care and decoration, the planning and construction of new buildings – the needs of the stars and the strategy related to the launch of new movies, all keeping in mind the temporal framework and the obtainment of prizes.

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